

**EXHIBIT 2-d to PLAINTIFFS'
APPENDIX OF EXPERT REPORTS**

Median									
Code	Occupation	Major	Detail	Percent	Average	Hourly	Annual	Annual	Percent
29-0000	<u>Healthcare Practitioners and Technical Occupations</u>								
29-1011	<u>Chiropractors</u>	major	12,620	9.7%	97,266	1.65	\$28.28	\$33.43	\$69,530
29-1021	<u>Dentists, General</u>	detail	40	40.3%	0.281	1.18	\$33.87	\$36.43	\$75,770
29-1031	<u>Dietitians and Nutritionists</u>	detail	80	33.7%	0.604	0.80	\$55.12	\$71.13	\$147,950
29-1051	<u>Pharmacists</u>	detail	80	20.5%	0.648	1.41	\$28.87	\$29.27	\$60,880
29-1071	<u>Physician Assistants</u>	detail	510	14.3%	3.943	1.86	\$61.91	\$57.36	\$119,310
29-1122	<u>Occupational Therapists</u>	detail	130	38.8%	1.008	1.23	\$50.33	\$49.50	\$102,960
29-1123	<u>Physical Therapists</u>	detail	130	28.8%	1.001	1.10	\$37.13	\$37.75	\$78,510
29-1126	<u>Respiratory Therapists</u>	detail	290	25.9%	2.256	1.42	\$43.56	\$42.25	\$87,880
29-1127	<u>Speech-Language Pathologists</u>	detail	250	8.1%	1.896	2.11	\$27.59	\$27.66	\$57,520
29-1131	<u>Veterinarians</u>	detail	300	25.5%	2.317	2.21	\$28.99	\$30.52	\$63,490
29-1141	<u>Registered Nurses</u>	detail	40	20.0%	0.335	0.66	\$39.20	\$44.83	\$93,250
		detail	4,850	12.3%	37.385	1.84	\$30.13	\$30.89	\$64,240
									2.5%

29-0000	<u>Healthcare Practitioners and Technical Occupations</u>	major	12,620	9.7%	97,266	1.65	\$28.28	\$33.43	\$69,530	3.1%
29-1011	<u>Chiropractors</u>	detail	40	40.3%	0.281	1.18	\$33.87	\$36.43	\$75,770	27.0%
29-1021	<u>Dentists, General</u>	detail	80	33.7%	0.604	0.80	\$55.12	\$71.13	\$147,950	17.3%
29-1031	<u>Dietitians and Nutritionists</u>	detail	80	20.5%	0.648	1.41	\$28.87	\$29.27	\$60,880	3.9%
29-1051	<u>Pharmacists</u>	detail	510	14.3%	3.943	1.86	\$61.91	\$57.36	\$119,310	3.6%
29-1071	<u>Physician Assistants</u>	detail	130	38.8%	1.008	1.23	\$50.33	\$49.50	\$102,960	3.3%
29-1122	<u>Occupational Therapists</u>	detail	130	28.8%	1.001	1.10	\$37.13	\$37.75	\$78,510	3.5%
29-1123	<u>Physical Therapists</u>	detail	290	25.9%	2.256	1.42	\$43.56	\$42.25	\$87,880	3.9%
29-1126	<u>Respiratory Therapists</u>	detail	250	8.1%	1.896	2.11	\$27.59	\$27.66	\$57,520	2.9%
29-1127	<u>Speech-Language Pathologists</u>	detail	300	25.5%	2.317	2.21	\$28.99	\$30.52	\$63,490	6.6%
29-1131	<u>Veterinarians</u>	detail	40	20.0%	0.335	0.66	\$39.20	\$44.83	\$93,250	10.2%
29-1141	<u>Registered Nurses</u>	detail	4,850	12.3%	37.385	1.84	\$30.13	\$30.89	\$64,240	2.5%
29-1151	<u>Nurse Anesthetists</u>	detail	(8)	(8)	(8)	(8)	\$85.37	\$81.56	\$169,650	4.9%
29-1171	<u>Nurse Practitioners</u>	detail	270	25.8%	2.091	1.53	\$46.27	\$46.86	\$97,460	2.9%
29-1215	<u>Family Medicine Physicians</u>	detail	40	35.3%	0.334	0.45	\$85.35	\$86.39	\$179,680	12.7%
29-1218	<u>Obstetricians and Gynecologists</u>	detail	(8)	(8)	(8)	(8)	(5)	\$131.52	\$273,560	28.3%
29-1228	<u>Physicians, All Other; and Ophthalmologists, Except Pediatric</u>	detail	470	17.7%	3.661	1.38	\$91.72	\$96.55	\$200,830	7.7%
29-1248	<u>Surgeons, Except Ophthalmologists</u>	detail	50	34.8%	0.397	1.61	(5)	\$128.45	\$267,180	11.8%
29-1292	<u>Dental Hygienists</u>	detail	180	30.6%	1.365	0.91	\$30.15	\$30.17	\$62,760	4.7%
29-2010	<u>Clinical Laboratory Technologists and Technicians</u>	broad	360	25.6%	2.795	1.26	\$24.02	\$25.03	\$52,050	2.7%
29-2031	<u>Cardiovascular Technologists and Technicians</u>	detail	130	21.3%	1.001	2.62	\$20.63	\$24.15	\$50,220	1.5%
29-2032	<u>Diagnostic Medical Sonographers</u>	detail	80	17.9%	0.599	1.21	\$31.69	\$31.98	\$66,530	2.4%
29-2033	<u>Nuclear Medicine Technologists</u>	detail	30	0.0%	0.241	1.95	\$30.60	\$29.77	\$61,930	2.0%
29-2034	<u>Radiologic Technologists and Technicians</u>	detail	350	21.6%	2.681	1.90	\$26.23	\$26.58	\$55,280	2.7%
29-2040	<u>Emergency Medical Technicians and Paramedics</u>	broad	340	10.3%	2.584	1.46	\$13.19	\$14.14	\$29,410	5.0%
29-2052	<u>Pharmacy Technicians</u>	detail	770	14.9%	5.915	2.08	\$13.86	\$14.74	\$30,670	3.6%
29-2053	<u>Psychiatric Technicians</u>	detail	(8)	(8)	(8)	(8)	\$12.35	\$12.71	\$26,440	3.0%
29-2055	<u>Surgical Technologists</u>	detail	270	16.6%	2.048	2.76	\$20.07	\$20.58	\$42,810	2.0%
29-2056	<u>Veterinary Technologists and Technicians</u>	detail	50	44.7%	0.362	0.48	\$15.24	\$15.37	\$31,970	6.1%
29-2061	<u>Licensed Practical and Licensed Vocational Nurses</u>	detail	1,230	8.8%	9.505	2.00	\$18.40	\$18.96	\$39,430	1.6%
29-2081	<u>Opticians, Dispensing</u>	detail	100	20.0%	0.803	1.63	\$16.42	\$16.90	\$35,140	5.8%
29-2098	<u>Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other</u>	detail	580	19.5%	4.441	1.97	\$21.09	\$22.38	\$46,540	3.8%
29-9098	<u>Health Information Technologists, Medical Registrars, Surgical Assistants, and Healthcare Practitioners and Technical Workers, All Other</u>	detail	50	34.4%	0.399	1.08	\$25.68	\$26.16	\$54,410	7.1%

00-0000	All Occupations	total	129,710	2.2%	1000.000	1.00	\$16.42	\$20.66	\$42,970	1.7%
11-0000	<u>Management Occupations</u>	major	5,720	3.9%	44.127	0.80	\$37.13	\$42.68	\$88,770	2.1%
11-1011	<u>Chief Executives</u>	detail	210	20.0%	1.616	1.15	\$71.76	\$76.07	\$158,230	6.3%
11-1021	<u>General and Operations Managers</u>	detail	2,000	5.5%	15.455	0.95	\$33.91	\$40.86	\$84,980	2.6%
11-1031	<u>Legislators</u>	detail	(8)	(8)	(8)	(8)	(4)	(4)	\$21,360	7.2%
11-2021	<u>Marketing Managers</u>	detail	50	13.4%	0.406	0.23	\$36.99	\$51.91	\$107,960	11.1%
11-2022	<u>Sales Managers</u>	detail	150	13.1%	1.158	0.42	\$41.06	\$48.60	\$101,090	6.6%
11-3010	<u>Administrative Services and Facilities Managers</u>	broad	220	18.7%	1.680	0.80	\$38.26	\$40.25	\$83,720	3.0%
11-3021	<u>Computer and Information Systems Managers</u>	detail	70	19.0%	0.522	0.18	\$51.60	\$54.07	\$112,470	3.7%
11-3031	<u>Financial Managers</u>	detail	330	14.9%	2.580	0.58	\$40.55	\$46.08	\$95,840	5.7%
11-3051	<u>Industrial Production Managers</u>	detail	220	9.5%	1.725	1.36	\$49.92	\$52.00	\$108,160	2.7%
11-3071	<u>Transportation, Storage, and Distribution Managers</u>	detail	90	24.2%	0.697	0.78	\$36.97	\$40.73	\$84,710	5.9%
11-3121	<u>Human Resources Managers</u>	detail	60	14.4%	0.436	0.41	\$51.91	\$56.58	\$117,690	7.4%
11-9021	<u>Construction Managers</u>	detail	250	16.8%	1.893	0.95	\$35.86	\$39.39	\$81,930	4.4%
11-9031	<u>Education and Childcare Administrators, Preschool and Daycare</u>	detail	30	35.3%	0.248	0.70	\$18.18	\$18.37	\$38,200	10.1%
11-9032	<u>Education Administrators, Kindergarten through Secondary</u>	detail	340	11.2%	2.655	1.44	(4)	(4)	\$70,550	2.5%
11-9033	<u>Education Administrators, Postsecondary</u>	detail	130	0.4%	1.030	1.04	\$43.76	\$51.38	\$106,870	4.2%
11-9041	<u>Architectural and Engineering Managers</u>	detail	120	15.4%	0.953	0.72	\$61.05	\$62.71	\$130,440	3.3%
11-9051	<u>Food Service Managers</u>	detail	250	16.0%	1.894	1.18	\$18.61	\$21.51	\$44,740	5.4%
11-9111	<u>Medical and Health Services Managers</u>	detail	(8)	(8)	(8)	(8)	\$43.62	\$47.40	\$98,580	3.8%
11-9121	<u>Natural Sciences Managers</u>	detail	30	8.5%	0.262	0.57	\$46.60	\$47.13	\$98,040	2.6%
11-9141	<u>Property, Real Estate, and Community Association Managers</u>	detail	120	12.6%	0.894	0.60	\$23.28	\$27.05	\$56,260	12.2%
11-9151	<u>Social and Community Service Managers</u>	detail	80	14.5%	0.613	0.58	\$30.38	\$32.83	\$68,290	5.1%
11-9171	<u>Funeral Home Managers</u>	detail	(8)	(8)	(8)	(8)	\$27.88	\$29.56	\$61,480	10.6%
11-9198	<u>Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other</u>	detail	170	7.2%	1.326	0.41	\$39.41	\$38.86	\$80,830	4.6%

Director, Community Organization
 DOT 187.167-234
 SOC 11-9151



O*NET OnLine

DOT Crosswalk Search for:

187.167-234

Search again:

1 code matching "187.167-234" in Dictionary of Occupational Titles (DOT)

187.167-234 Director, Community Organization

11-9151.00 Social and Community Service Managers Bright Outlook

21-0000	<u>Community and Social Service Occupations</u>	major	2,440	8.2%	18.837	1.23	\$17.71	\$19.71	\$41,000	3.8%
21-1012	<u>Educational, Guidance, and Career Counselors and Advisors</u>	detail	280	14.8%	2.163	1.07	\$23.06	\$23.83	\$49,570	4.3%
21-1013	<u>Marriage and Family Therapists</u>	detail	80	41.4%	0.623	1.55	\$14.19	\$14.68	\$30,540	11.3%
21-1015	<u>Rehabilitation Counselors</u>	detail	140	26.6%	1.096	1.48	\$19.20	\$19.99	\$41,580	3.4%
21-1018	<u>Substance Abuse, Behavioral Disorder, and Mental Health Counselors</u>	detail	400	23.6%	3.058	1.58	\$18.23	\$21.54	\$44,800	11.6%
21-1021	<u>Child, Family, and School Social Workers</u>	detail	230	4.6%	1.768	0.79	\$18.22	\$18.86	\$39,230	2.5%
21-1022	<u>Healthcare Social Workers</u>	detail	100	12.4%	0.803	0.67	\$24.83	\$24.62	\$51,210	3.5%
21-1023	<u>Mental Health and Substance Abuse Social Workers</u>	detail	100	39.3%	0.783	0.98	\$19.63	\$19.76	\$41,100	7.1%
21-1029	<u>Social Workers, All Other</u>	detail	60	0.0%	0.470	1.18	\$36.46	\$35.25	\$73,330	3.2%
21-1091	<u>Health Education Specialists</u>	detail	80	18.6%	0.645	1.62	\$22.31	\$25.34	\$52,720	4.4%
21-1092	<u>Probation Officers and Correctional Treatment Specialists</u>	detail	70	0.0%	0.527	0.88	\$19.98	\$21.52	\$44,760	1.4%
21-1093	<u>Social and Human Service Assistants</u>	detail	790	14.7%	6.117	2.22	\$14.83	\$15.51	\$32,250	3.2%
21-1094	<u>Community Health Workers</u>	detail	40	30.7%	0.324	0.81	\$16.63	\$17.86	\$37,140	4.8%
21-2011	<u>Clergy</u>	detail	(8)	(8)	(8)	(8)	\$21.56	\$21.70	\$45,130	2.1%

Community Organization Worker
DOT 195.167-010

SOC 21-1021



O*NET OnLine

DOT Crosswalk Search for:

195.167-010

Search again:

1 code matching "195.167-010" in Dictionary of Occupational Titles (DOT)

195.167-010 Community Organization Worker

21-1021.00 Child, Family, and School Social Workers Bright Outlook

barrett@forensiceconomics.org

From: Lori Halstead <Halstead@forensiceconomics.org>
Sent: Tuesday, July 14, 2020 9:30 AM
To: barrett@forensiceconomics.org
Subject: Commercial Lease Properties

1) 555 5th Avenue, Huntington, WV 25701

1,400 square feet

\$14/ sq ft

\$19,600/ year

\$1,633/ month

Utilities included

2) 314 9th Street, Huntington, WV 25701

3,100 square feet

\$15/ square ft

\$46,500/ year

\$3,875/ month

Utilities included

3) 935 3rd Avenue, Huntington, WV 25701

2,486 square feet

\$12/ sq ft

\$29,832/ year

\$2,486/ month

Utilities included

4) 744 4th Avenue, Huntington, WV 25701

1,500 square feet

\$15/ sq ft

\$22,500/ year

\$1,875/ month

Utilities included

Lori B. Halstead, M.B.A

Forensic Case Manager

Brookshire Barrett & Associates

304-562-0180

halstead@forensiceconomics.org

forensiceconomics.org

29-0000	<u>Healthcare Practitioners and Technical Occupations</u>	major	12,620	9.7%	97.266	1.65	\$28.28	\$33.43	\$69,530	3.1%
29-1011	<u>Chiropractors</u>	detail	40	40.3%	0.281	1.18	\$33.87	\$36.43	\$75,770	27.0%
29-1021	<u>Dentists, General</u>	detail	80	33.7%	0.604	0.80	\$55.12	\$71.13	\$147,950	17.3%
29-1031	<u>Dietitians and Nutritionists</u>	detail	80	20.5%	0.648	1.41	\$28.87	\$29.27	\$60,880	3.9%
29-1051	<u>Pharmacists</u>	detail	510	14.3%	3.943	1.86	\$61.91	\$57.36	\$119,310	3.6%
29-1071	<u>Physician Assistants</u>	detail	130	38.8%	1.008	1.23	\$50.33	\$49.50	\$102,960	3.3%
29-1122	<u>Occupational Therapists</u>	detail	130	28.8%	1.001	1.10	\$37.13	\$37.75	\$78,510	3.5%
29-1123	<u>Physical Therapists</u>	detail	290	25.9%	2.256	1.42	\$43.56	\$42.25	\$87,880	3.9%
29-1126	<u>Respiratory Therapists</u>	detail	250	8.1%	1.896	2.11	\$27.59	\$27.66	\$57,520	2.9%
29-1127	<u>Speech-Language Pathologists</u>	detail	300	25.5%	2.317	2.21	\$28.99	\$30.52	\$63,490	6.6%
29-1131	<u>Veterinarians</u>	detail	40	20.0%	0.335	0.66	\$39.20	\$44.83	\$93,250	10.2%
29-1141	<u>Registered Nurses</u>	detail	4,850	12.3%	37.385	1.84	\$30.13	\$30.89	\$64,240	2.5%
29-1151	<u>Nurse Anesthetists</u>	detail	(8)	(8)	(8)	(8)	\$85.37	\$81.56	\$169,650	4.9%
29-1171	<u>Nurse Practitioners</u>	detail	270	25.8%	2.091	1.53	\$46.27	\$46.86	\$97,460	2.9%
29-1215	<u>Family Medicine Physicians</u>	detail	40	35.3%	0.334	0.45	\$85.35	\$86.39	\$179,680	12.7%
29-1218	<u>Obstetricians and Gynecologists</u>	detail	(8)	(8)	(8)	(8)	(5)	\$131.52	\$273,560	28.3%
29-1228	<u>Physicians, All Other; and Ophthalmologists, Except Pediatric</u>	detail	470	17.7%	3.661	1.38	\$91.72	\$96.55	\$200,830	7.7%
29-1248	<u>Surgeons, Except Ophthalmologists</u>	detail	50	34.8%	0.397	1.61	(5)	\$128.45	\$267,180	11.8%
29-1292	<u>Dental Hygienists</u>	detail	180	30.6%	1.365	0.91	\$30.15	\$30.17	\$62,760	4.7%
29-2010	<u>Clinical Laboratory Technologists and Technicians</u>	broad	360	25.6%	2.795	1.26	\$24.02	\$25.03	\$52,050	2.7%
29-2031	<u>Cardiovascular Technologists and Technicians</u>	detail	130	21.3%	1.001	2.62	\$20.63	\$24.15	\$50,220	1.5%
29-2032	<u>Diagnostic Medical Sonographers</u>	detail	80	17.9%	0.599	1.21	\$31.69	\$31.98	\$66,530	2.4%
29-2033	<u>Nuclear Medicine Technologists</u>	detail	30	0.0%	0.241	1.95	\$30.60	\$29.77	\$61,930	2.0%
29-2034	<u>Radiologic Technologists and Technicians</u>	detail	350	21.6%	2.681	1.90	\$26.23	\$26.58	\$55,280	2.7%
29-2040	<u>Emergency Medical Technicians and Paramedics</u>	broad	340	10.3%	2.584	1.46	\$13.19	\$14.14	\$29,410	5.0%
29-2052	<u>Pharmacy Technicians</u>	detail	770	14.9%	5.915	2.08	\$13.86	\$14.74	\$30,670	3.6%
29-2053	<u>Psychiatric Technicians</u>	detail	(8)	(8)	(8)	(8)	\$12.35	\$12.71	\$26,440	3.0%
29-2055	<u>Surgical Technologists</u>	detail	270	16.6%	2.048	2.76	\$20.07	\$20.58	\$42,810	2.0%
29-2056	<u>Veterinary Technologists and Technicians</u>	detail	50	44.7%	0.362	0.48	\$15.24	\$15.37	\$31,970	6.1%
29-2061	<u>Licensed Practical and Licensed Vocational Nurses</u>									

00-0000	All Occupations	total	129,710	2.2%	1000.000	1.00	\$16.42	\$20.66	\$42,970	1.7%
11-0000	<u>Management Occupations</u>	major	5,720	3.9%	44.127	0.80	\$37.13	\$42.68	\$88,770	2.1%
11-1011	<u>Chief Executives</u>	detail	210	20.0%	1.616	1.15	\$71.76	\$76.07	\$158,230	6.3%
11-1021	<u>General and Operations Managers</u>	detail	2,000	5.5%	15.455	0.95	\$33.91	\$40.86	\$84,980	2.6%
11-1031	<u>Legislators</u>	detail	(8)	(8)	(8)	(8)	(4)	(4)	\$21,360	7.2%
11-2021	<u>Marketing Managers</u>	detail	50	13.4%	0.406	0.23	\$36.99	\$51.91	\$107,960	11.1%
11-2022	<u>Sales Managers</u>	detail	150	13.1%	1.158	0.42	\$41.06	\$48.60	\$101,090	6.6%
11-3010	<u>Administrative Services and Facilities Managers</u>	broad	220	18.7%	1.680	0.80	\$38.26	\$40.25	\$83,720	3.0%
11-3021	<u>Computer and Information Systems Managers</u>	detail	70	19.0%	0.522	0.18	\$51.60	\$54.07	\$112,470	3.7%
11-3031	<u>Financial Managers</u>	detail	330	14.9%	2.580	0.58	\$40.55	\$46.08	\$95,840	5.7%
11-3051	<u>Industrial Production Managers</u>	detail	220	9.5%	1.725	1.36	\$49.92	\$52.00	\$108,160	2.7%
11-3071	<u>Transportation, Storage, and Distribution Managers</u>	detail	90	24.2%	0.697	0.78	\$36.97	\$40.73	\$84,710	5.9%
11-3121	<u>Human Resources Managers</u>	detail	60	14.4%	0.436	0.41	\$51.91	\$56.58	\$117,690	7.4%
11-9021	<u>Construction Managers</u>	detail	250	16.8%	1.893	0.95	\$35.86	\$39.39	\$81,930	4.4%
11-9031	<u>Education and Childcare Administrators, Preschool and Daycare</u>	detail	30	35.3%	0.248	0.70	\$18.18	\$18.37	\$38,200	10.1%
11-9032	<u>Education Administrators, Kindergarten through Secondary</u>	detail	340	11.2%	2.655	1.44	(4)	(4)	\$70,550	2.5%
11-9033	<u>Education Administrators, Postsecondary</u>	detail	130	0.4%	1.030	1.04	\$43.76	\$51.38	\$106,870	4.2%
11-9041	<u>Architectural and Engineering Managers</u>	detail	120	15.4%	0.953	0.72	\$61.05	\$62.71	\$130,440	3.3%
11-9051	<u>Food Service Managers</u>	detail	250	16.0%	1.894	1.18	\$18.61	\$21.51	\$44,740	5.4%
11-9111	<u>Medical and Health Services Managers</u>	detail	(8)	(8)	(8)	(8)	\$43.62	\$47.40	\$98,580	3.8%
11-9121	<u>Natural Sciences Managers</u>	detail	30	8.5%	0.262	0.57	\$46.60	\$47.13	\$98,040	2.6%
11-9141	<u>Property, Real Estate, and Community Association Managers</u>	detail	120	12.6%	0.894	0.60	\$23.28	\$27.05	\$56,260	12.2%
11-9151	<u>Social and Community Service Managers</u>	detail	80	14.5%	0.613	0.58	\$30.38	\$32.83	\$68,290	5.1%
11-9171	<u>Funeral Home Managers</u>	detail	(8)	(8)	(8)	(8)	\$27.88	\$29.56	\$61,480	10.6%
11-9198	<u>Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other</u>	detail	170	7.2%	1.326	0.41	\$39.41	\$38.86	\$80,830	4.6%

15-0000	<u>Computer and Mathematical Occupations</u>	major	1,150	8.0%	8.830	0.28	\$28.31	\$31.08	\$64,650	3.9%
15-1211	<u>Computer Systems Analysts</u>	detail	40	24.0%	0.276	0.07	\$37.16	\$36.72	\$76,380	4.2%
15-1231	<u>Computer Network Support Specialists</u>	detail	120	47.0%	0.912	0.72	\$31.95	\$37.57	\$78,140	10.4%
15-1232	<u>Computer User Support Specialists</u>	detail	320	15.4%	2.457	0.56	\$21.38	\$21.54	\$44,790	3.6%
15-1244	<u>Network and Computer Systems Administrators</u>	detail	150	11.0%	1.132	0.47	\$30.73	\$32.46	\$67,520	3.6%
15-1245	<u>Database Administrators and Architects</u>	detail	30	11.7%	0.231	0.27	\$28.11	\$29.47	\$61,300	6.0%
15-1251	<u>Computer Programmers</u>	detail	(8)	(8)	(8)	(8)	\$27.07	\$30.16	\$62,740	9.4%
15-1256	<u>Software Developers and Software Quality Assurance Analysts and Testers</u>	detail	110	39.7%	0.818	0.09	\$40.23	\$41.84	\$87,020	12.0%
15-1257	<u>Web Developers and Digital Interface Designers</u>	detail	30	16.6%	0.260	0.26	\$24.81	\$28.71	\$59,710	16.1%
15-1299	<u>Computer Occupations, All Other</u>	detail	120	29.5%	0.907	0.34	\$35.49	\$33.81	\$70,320	4.9%
15-2031	<u>Operations Research Analysts</u>	detail	120	16.1%	0.895	1.32	\$30.26	\$29.40	\$61,150	6.8%

43-4121	<u>Library Assistants, Clerical</u>	detail	180	12.9%	1.411	2.41	\$11.15	\$12.00	\$24,950	1.8%
43-4131	<u>Loan Interviewers and Clerks</u>	detail	50	35.4%	0.382	0.27	\$15.82	\$16.19	\$33,670	8.4%
43-4141	<u>New Accounts Clerks</u>	detail	40	39.4%	0.308	1.04	\$17.11	\$17.32	\$36,030	7.2%
43-4161	<u>Human Resources Assistants, Except Payroll and Timekeeping</u>	detail	70	8.5%	0.511	0.64	\$18.33	\$18.37	\$38,210	4.4%
43-4171	<u>Receptionists and Information Clerks</u>	detail	920	8.7%	7.114	0.99	\$12.45	\$13.00	\$27,030	2.9%
43-4199	<u>Information and Record Clerks, All Other</u>	detail	90	12.3%	0.687	0.66	\$19.89	\$20.05	\$41,710	2.2%
43-5021	<u>Couriers and Messengers</u>	detail	30	16.7%	0.257	0.50	\$11.19	\$12.38	\$25,750	4.0%
43-5031	<u>Public Safety Telecommunicators</u>	detail	160	22.8%	1.245	1.92	\$16.75	\$17.23	\$35,840	3.8%
43-5032	<u>Dispatchers, Except Police, Fire, and Ambulance</u>	detail	130	21.4%	0.996	0.73	\$20.46	\$19.57	\$40,710	5.3%
43-5041	<u>Meter Readers, Utilities</u>	detail	60	23.7%	0.475	2.29	\$16.80	\$16.97	\$35,300	7.3%
43-5051	<u>Postal Service Clerks</u>	detail	120	0.0%	0.925	1.67	\$23.63	\$24.23	\$50,400	1.2%
43-5052	<u>Postal Service Mail Carriers</u>	detail	400	0.0%	3.084	1.33	\$23.82	\$24.56	\$51,080	1.5%
43-5061	<u>Production, Planning, and Expediting Clerks</u>	detail	150	7.8%	1.174	0.47	\$20.28	\$21.30	\$44,300	6.2%
43-5071	<u>Shipping, Receiving, and Inventory Clerks</u>	detail	350	11.8%	2.716	0.57	\$15.03	\$15.97	\$33,220	3.3%
43-6011	<u>Executive Secretaries and Executive Administrative Assistants</u>	detail	150	12.6%	1.157	0.31	\$23.33	\$24.80	\$51,580	4.5%
43-6012	<u>Legal Secretaries and Administrative Assistants</u>	detail	190	22.4%	1.427	1.25	\$16.94	\$17.32	\$36,030	8.6%
43-6013	<u>Medical Secretaries and Administrative Assistants</u>	detail	590	32.2%	4.563	1.11	\$15.84	\$16.39	\$34,090	2.7%
43-6014	<u>Secretaries and Administrative Assistants, Except Legal, Medical, and Executive</u>	detail	1,680	6.5%	12.948	0.93	\$14.47	\$15.07	\$31,350	2.2%
43-9041	<u>Insurance Claims and Policy Processing Clerks</u>	detail	150	34.2%	1.132	0.65	\$16.40	\$17.00	\$35,370	2.8%
43-9051	<u>Mail Clerks and Mail Machine Operators, Except Postal Service</u>	detail	60	15.5%	0.469	0.82	\$10.50	\$11.53	\$23,980	4.6%
43-9061	<u>Office Clerks, General</u>	detail	3,250	6.1%	25.064	1.25	\$13.78	\$14.70	\$30,580	1.4%
43-9199	<u>Office and Administrative Support Workers, All Other</u>	detail	90	2.1%	0.712	0.55	\$17.70	\$18.43	\$38,340	2.3%

21-0000	<u>Community and Social Service Occupations</u>	major	2,440	8.2%	18.837	1.23	\$17.71	\$19.71	\$41,000	3.8%
21-1012	<u>Educational, Guidance, and Career Counselors and Advisors</u>	detail	280	14.8%	2.163	1.07	\$23.06	\$23.83	\$49,570	4.3%
21-1013	<u>Marriage and Family Therapists</u>	detail	80	41.4%	0.623	1.55	\$14.19	\$14.68	\$30,540	11.3%
21-1015	<u>Rehabilitation Counselors</u>	detail	140	26.6%	1.096	1.48	\$19.20	\$19.99	\$41,580	3.4%
21-1018	<u>Substance Abuse, Behavioral Disorder, and Mental Health Counselors</u>	detail	400	23.6%	3.058	1.58	\$18.23	\$21.54	\$44,800	11.6%
21-1021	<u>Child, Family, and School Social Workers</u>	detail	230	4.6%	1.768	0.79	\$18.22	\$18.86	\$39,230	2.5%
21-1022	<u>Healthcare Social Workers</u>	detail	100	12.4%	0.803	0.67	\$24.83	\$24.62	\$51,210	3.5%
21-1023	<u>Mental Health and Substance Abuse Social Workers</u>	detail	100	39.3%	0.783	0.98	\$19.63	\$19.76	\$41,100	7.1%
21-1029	<u>Social Workers, All Other</u>	detail	60	0.0%	0.470	1.18	\$36.46	\$35.25	\$73,330	3.2%
21-1091	<u>Health Education Specialists</u>	detail	80	18.6%	0.645	1.62	\$22.31	\$25.34	\$52,720	4.4%
21-1092	<u>Probation Officers and Correctional Treatment Specialists</u>	detail	70	0.0%	0.527	0.88	\$19.98	\$21.52	\$44,760	1.4%
21-1093	<u>Social and Human Service Assistants</u>	detail	790	14.7%	6.117	2.22	\$14.83	\$15.51	\$32,250	3.2%
21-1094	<u>Community Health Workers</u>	detail	40	30.7%	0.324	0.81	\$16.63	\$17.86	\$37,140	4.8%
21-2011	<u>Clergy</u>	detail	(8)	(8)	(8)	(8)	\$21.56	\$21.70	\$45,130	2.1%

Median Annual Wage of Peer Recovery Coaches
 Prestera...Call with human resources

Hourly Wage: \$9.00
 Annual Hours: 2,080
 Median Annual Wage: \$18,720.00

<u>Year</u>	<u>Wage</u>	<u>Growth</u>	<u>Wage</u>	<u>Year</u>
2019	\$18,720.00	3.49%	\$19,373.33	2020
2020	\$19,373.33	3.44%	\$20,039.77	2021
2021	\$20,039.77	3.44%	\$20,729.14	2022
2022	\$20,729.14	3.44%	\$21,442.22	2023
2023	\$21,442.22	3.44%	\$22,179.83	2024
2024	\$22,179.83	3.44%	\$22,942.82	2025
2025	\$22,942.82	3.44%	\$23,732.05	2026
2026	\$23,732.05	3.44%	\$24,548.44	2027
2027	\$24,548.44	3.44%	\$25,392.90	2028
2028	\$25,392.90	3.44%	\$26,266.42	2029
2029	\$26,266.42	3.44%	\$27,169.98	2030
2030	\$27,169.98	3.44%	\$28,104.63	2031
2031	\$28,104.63	3.44%	\$29,071.43	2032
2032	\$29,071.43	3.44%	\$30,071.49	2033
2033	\$30,071.49	3.44%	\$31,105.94	2034
2034	\$31,105.94	3.44%	\$32,175.99	2035
2035	\$32,175.99			

It is best if you have the exact change for your bus fare if you are not riding with a pass. Necessary change is available at TTA Center.



Bus Fares

- \$1.00 – Adults, Children 7 years of age and older
- \$0.50 – Seniors and Disabled with Medicare Cards. Disabled without a Medicare Card, you may be eligible. [Click here for an application](#)
- \$0.25 – Zone Fare
- \$35.00 – 31-Day Pass, Unlimited Rides
- \$4.00 – Day Pass, Unlimited Rides

Dial-A-Ride Fares

- \$2.00 – Basic Fare

©Tri-State Transit Authority 2020 - All Rights Reserved.

Website by **eve, Inc.**

Call us in West Virginia: 304-529-RIDE(7433) tta@tta-wv.com



Fares

TTA provides bus and paratransit service Monday through Saturday in our service area. Most of the daytime schedules operate between 6:15 a.m. and 6:15 p.m.

Night service is operated from 6:15 p.m. to 11:15 p.m. on modified routes designed to serve most of the locations served by the day routes.

There are three zones in the West Virginia service area. Zone 1 is the City of Huntington. Zone 2 is east of the K-Mart Plaza on U.S. Route 60. Zone 3 is service between Milton and Culloden.

All TTA Riders can also purchase \$5 and \$10 "Value Cards" which can be used like a debit card in TTA's electronic fareboxes. TTA buses and Dial a Ride vans are equipped with automatic electronic fare boxes.

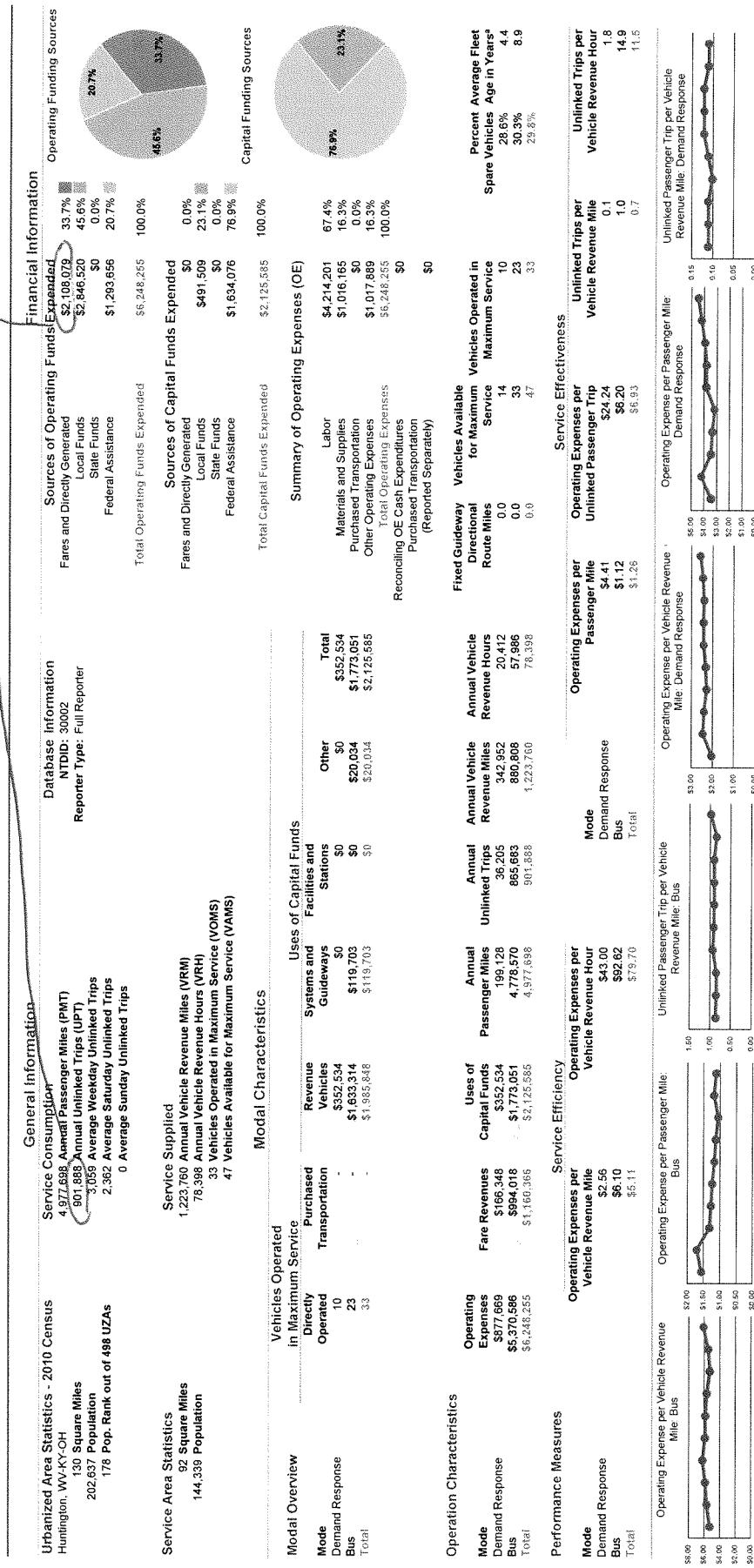
Passes and Value Cards can also be purchased from the electronic fare boxes. The electronic fare boxes do not make cash change. They dispense a change card good only for rides on the TTA transit system.

\$2,108,079 ÷ 901,888 =
\$2.34 per fare

The Tri-State Transit Authority

2018 Annual Agency Profile

<http://www.tta.wv.com/>
1120 Virginia Avenue, West
P.O. Box 7865
Huntington, WV 25779



Notes:
*Demand Response - Tax (DT) and non-dedicated fleets do not report fleet age data.

21-0000	<u>Community and Social Service Occupations</u>	major	2,440	8.2%	18.837	1.23	\$17.71	\$19.71	\$41,000	3.8%
21-1012	<u>Educational, Guidance, and Career Counselors and Advisors</u>	detail	280	14.8%	2.163	1.07	\$23.06	\$23.83	\$49,570	4.3%
21-1013	<u>Marriage and Family Therapists</u>	detail	80	41.4%	0.623	1.55	\$14.19	\$14.68	\$30,540	11.3%
21-1015	<u>Rehabilitation Counselors</u>	detail	140	26.6%	1.096	1.48	\$19.20	\$19.99	\$41,580	3.4%
21-1018	<u>Substance Abuse, Behavioral Disorder, and Mental Health Counselors</u>	detail	400	23.6%	3.058	1.58	\$18.23	\$21.54	\$44,800	11.6%
21-1021	<u>Child, Family, and School Social Workers</u>	detail	230	4.6%	1.768	0.79	\$18.22	\$18.86	\$39,230	2.5%
21-1022	<u>Healthcare Social Workers</u>	detail	100	12.4%	0.803	0.67	\$24.83	\$24.62	\$51,210	3.5%
21-1023	<u>Mental Health and Substance Abuse Social Workers</u>	detail	100	39.3%	0.783	0.98	\$19.63	\$19.76	\$41,100	7.1%
21-1029	<u>Social Workers, All Other</u>	detail	60	0.0%	0.470	1.18	\$36.46	\$35.25	\$73,330	3.2%
21-1091	<u>Health Education Specialists</u>	detail	80	18.6%	0.645	1.62	\$22.31	\$25.34	\$52,720	4.4%
21-1092	<u>Probation Officers and Correctional Treatment Specialists</u>	detail	70	0.0%	0.527	0.88	\$19.98	\$21.52	\$44,760	1.4%
21-1093	<u>Social and Human Service Assistants</u>	detail	790	14.7%	6.117	2.22	\$14.83	\$15.51	\$32,250	3.2%
21-1094	<u>Community Health Workers</u>	detail	40	30.7%	0.324	0.81	\$16.63	\$17.86	\$37,140	4.8%
21-2011	<u>Clergy</u>	detail	(8)	(8)	(8)	(8)	\$21.56	\$21.70	\$45,130	2.1%

33-0000	<u>Protective Service Occupations</u>	major	1,890	10.2%	14.607	0.61	\$15.89	\$17.75	\$36,920	5.4%
33-1012	<u>First-Line Supervisors of Police and Detectives</u>	detail	60	19.5%	0.483	0.59	\$27.36	\$28.62	\$59,520	2.7%
33-1090	<u>Miscellaneous First-Line Supervisors, Protective Service Workers</u>	broad	50	17.0%	0.413	0.73	\$18.86	\$19.18	\$39,900	8.1%
33-2011	<u>Firefighters</u>	detail	150	32.2%	1.123	0.51	\$19.20	\$19.60	\$40,770	8.3%
33-3012	<u>Correctional Officers and Jailers</u>	detail	230	2.7%	1.747	0.61	\$21.85	\$21.29	\$44,280	11.6%
33-3051	<u>Police and Sheriff's Patrol Officers</u>	detail	490	13.4%	3.785	0.84	\$20.15	\$21.65	\$45,030	2.2%
33-9032	<u>Security Guards</u>	detail	510	3.3%	3.941	0.51	\$9.77	\$11.61	\$24,140	6.3%
33-9092	<u>Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers</u>	detail	40	33.4%	0.314	0.32	\$9.10	\$9.57	\$19,900	5.3%
33-9098	<u>School Bus Monitors and Protective Service Workers, All Other</u>	detail	110	13.0%	0.814	0.82	\$16.25	\$16.23	\$33,750	2.5%

29-0000	<u>Healthcare Practitioners and Technical Occupations</u>	major	12,620	9.7%	97,266	1.65	\$28.28	\$33.43	\$69,530	3.1%
29-1011	<u>Chiropractors</u>	detail	40	40.3%	0.281	1.18	\$33.87	\$36.43	\$75,770	27.0%
29-1021	<u>Dentists, General</u>	detail	80	33.7%	0.604	0.80	\$55.12	\$71.13	\$147,950	17.3%
29-1031	<u>Dietitians and Nutritionists</u>	detail	80	20.5%	0.648	1.41	\$28.87	\$29.27	\$60,880	3.9%
29-1051	<u>Pharmacists</u>	detail	510	14.3%	3.943	1.86	\$61.91	\$57.36	\$119,310	3.6%
29-1071	<u>Physician Assistants</u>	detail	130	38.8%	1.008	1.23	\$50.33	\$49.50	\$102,960	3.3%
29-1122	<u>Occupational Therapists</u>	detail	130	28.8%	1.001	1.10	\$37.13	\$37.75	\$78,510	3.5%
29-1123	<u>Physical Therapists</u>	detail	290	25.9%	2.256	1.42	\$43.56	\$42.25	\$87,880	3.9%
29-1126	<u>Respiratory Therapists</u>	detail	250	8.1%	1.896	2.11	\$27.59	\$27.66	\$57,520	2.9%
29-1127	<u>Speech-Language Pathologists</u>	detail	300	25.5%	2.317	2.21	\$28.99	\$30.52	\$63,490	6.6%
29-1131	<u>Veterinarians</u>	detail	40	20.0%	0.335	0.66	\$39.20	\$44.83	\$93,250	10.2%
29-1141	<u>Registered Nurses</u>	detail	4,850	12.3%	37.385	1.84	\$30.13	\$30.89	\$64,240	2.5%
29-1151	<u>Nurse Anesthetists</u>	detail	(8)	(8)	(8)	(8)	\$85.37	\$81.56	\$169,650	4.9%
29-1171	<u>Nurse Practitioners</u>	detail	270	25.8%	2.091	1.53	\$46.27	\$46.86	\$97,460	2.9%
29-1215	<u>Family Medicine Physicians</u>	detail	40	35.3%	0.334	0.45	\$85.35	\$86.39	\$179,680	12.7%
29-1218	<u>Obstetricians and Gynecologists</u>	detail	(8)	(8)	(8)	(8)	(5)	\$131.52	\$273,560	28.3%
29-1228	<u>Physicians, All Other; and Ophthalmologists, Except Pediatric</u>	detail	470	17.7%	3.661	1.38	\$91.72	\$96.55	\$200,830	7.7%
29-1248	<u>Surgeons, Except Ophthalmologists</u>	detail	50	34.8%	0.397	1.61	(5)	\$128.45	\$267,180	11.8%
29-1292	<u>Dental Hygienists</u>	detail	180	30.6%	1.365	0.91	\$30.15	\$30.17	\$62,760	4.7%
29-2010	<u>Clinical Laboratory Technologists and Technicians</u>	broad	360	25.6%	2.795	1.26	\$24.02	\$25.03	\$52,050	2.7%
29-2031	<u>Cardiovascular Technologists and Technicians</u>	detail	130	21.3%	1.001	2.62	\$20.63	\$24.15	\$50,220	1.5%
29-2032	<u>Diagnostic Medical Sonographers</u>	detail	80	17.9%	0.599	1.21	\$31.69	\$31.98	\$66,530	2.4%
29-2033	<u>Nuclear Medicine Technologists</u>	detail	30	0.0%	0.241	1.95	\$30.60	\$29.77	\$61,930	2.0%
29-2034	<u>Radiologic Technologists and Technicians</u>	detail	350	21.6%	2.681	1.90	\$26.23	\$26.58	\$55,280	2.7%
29-2040	<u>Emergency Medical Technicians and Paramedics</u>	broad	340	10.3%	2.584	1.46	\$13.19	\$14.14	\$29,410	5.0%
29-2052	<u>Pharmacy Technicians</u>	detail	770	14.9%	5.915	2.08	\$13.86	\$14.74	\$30,670	3.6%
29-2053	<u>Psychiatric Technicians</u>	detail	(8)	(8)	(8)	(8)	\$12.35	\$12.71	\$26,440	3.0%
29-2055	<u>Surgical Technologists</u>	detail	270	16.6%	2.048	2.76	\$20.07	\$20.58	\$42,810	2.0%
29-2056	<u>Veterinary Technologists and Technicians</u>	detail	50	44.7%	0.362	0.48	\$15.24	\$15.37	\$31,970	6.1%
29-2061	<u>Licensed Practical and Licensed Vocational Nurses</u>	detail	1,230	8.8%	9.505	2.00	\$18.40	\$18.96	\$39,430	1.6%
29-2081	<u>Opticians, Dispensing</u>	detail	100	20.0%	0.803	1.63	\$16.42	\$16.90	\$35,140	5.8%
29-2098	<u>Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other</u>	detail	580	19.5%	4.441	1.97	\$21.09	\$22.38	\$46,540	3.8%

Message

From: Shawn Bowles [/O=CITY OF HUNTINGTON/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5563DA1FA93047A6836B473A2340229C-SHAWN]
Sent: 12/2/2019 6:49:17 PM
To: Dan Underwood [underwoodd@huntingtonwv.gov]
Subject: Re: LEAD Program - Wage Survey

The grant closed 09/30/19.

Here is the information from the original proposal:

Triage and Referral Coordinator	\$28000.00 x three years	\$84000.00
---------------------------------	--------------------------	------------

Triage and Referral Coordinator

Pension (Retirement 401K @ wages x 0.05) \$1400.00

Health Insurance (Full-time staff x .2186071)\$6120.00

FICA (Wages x 0.0765) \$2142.00

Total TRC Fringe x three years: \$28986.00

TRC Total + Fringe per year \$37662.00

TRC Total + Fringe for three years \$112986.00

Please remember the TRC was employed by Prestera and assigned to us.

From: Dan Underwood
Sent: Monday, December 2, 2019 3:39:14 PM
To: Shawn Bowles
Subject: Fw: LEAD Program - Wage Survey

see below

DM Underwood
Huntington Police Department
675 10th Street Huntington WV 25701
304-696-5560 ext. 1008

From: Sherry Lewis
Sent: Monday, December 2, 2019 8:13 AM
To: Dan Underwood
Subject: Re: LEAD Program - Wage Survey

Good morning, Dan:

In addition to the end date of the grant, can you also provide me with the annual salary and job description for the position that Krishawna held? I would like to be able to furnish this information to Ms. Wagers.

Sherry Lewis
Human Resources Director
City of Huntington
800 Fifth Avenue
P. O. Box 1659
Huntington, WV 25717
T: 304-696-5540 x2012
F: 304-696-5991
Email: lewiss@huntingtonwv.gov

From: Dan Underwood
Sent: Wednesday, November 27, 2019 12:41 PM
To: Sherry Lewis
Subject: Re: LEAD Program - Wage Survey

I will have to get with Bowles and find out. I will try and let you know ASAP.

DM Underwood
Huntington Police Department
675 10th Street Huntington WV 25701
304-696-5560 ext. 1008

From: Sherry Lewis
Sent: Wednesday, November 27, 2019 12:37:09 PM
To: Dan Underwood
Subject: Re: LEAD Program - Wage Survey

Dan,

Thank you for the information. What date did the grant end?

Sherry Lewis
Human Resources Director
City of Huntington
800 Fifth Avenue
P. O. Box 1659
Huntington, WV 25717
T: 304-696-5540 x2012
F: 304-696-5991
Email: lewiss@huntingtonwv.gov

From: Dan Underwood
Sent: Wednesday, November 27, 2019 12:01 PM
To: Sherry Lewis
Subject: Re: LEAD Program - Wage Survey

We had a grant, Krishawna Harless's job, but grant has ended and she went to work at one of the high schools.

DM Underwood
Huntington Police Department
675 10th Street
Huntington WV 25701
304.696.5560 ext 1008

----- Original message -----

From: Sherry Lewis <LewisS@HUNTINGONWV.GOV>
Date: 11/27/19 11:37 AM (GMT-05:00)
To: Dan Underwood <UnderwoodD@HUNTINGONWV.GOV>
Subject: Fw: LEAD Program - Wage Survey

Dan,

Please see below. Does HPD have such a program? If so, what positions fall under it?

Sherry Lewis
Human Resources Director
City of Huntington
800 Fifth Avenue
P. O. Box 1659
Huntington, WV 25717
T: 304-696-5540 x2012
F: 304-696-5991
Email: lewiss@huntingtonwv.gov

From: Wagers, Tiffany <Tiffany.Wagers@hamilton-co.org>
Sent: Wednesday, November 27, 2019 11:35 AM
To: Sherry Lewis
Subject: LEAD Program - Wage Survey

ATTENTION
THIS EMAIL IS NOT FROM AN OFFICIAL CITY OF HUNTINGTON ACCOUNT. USE CAUTION WHEN OPENING LINKS OR ATTACHMENTS.

Good morning,

I am conducting a salary wage survey for positions used in the Law Enforcement Assisted Diversion (LEAD) program. Could you please provide any job descriptions and salary information for this program used in Huntington?

If you have any questions, don't hesitate to ask. I can be reached by email or phone at the contact info below. I appreciate any information that you can provide.

Thank you,

Tiffany Wagers
Classification and Compensation Specialist
Hamilton County Personnel Department
tiffany.wagers@hamilton-co.org
513.946.4707

Hamilton County Administration Building
138 East Court Street, Room 707
Cincinnati, Ohio, 45202





Job Description rev. 3/31/2015

Job Title: Triage and Referral Coordinator

FLSA Status: Non-Exempt

Reports to: Program Director

Department: Justice/Addictions

Preparation date: March 31, 2015

Summary of Job Function: Provides screening, assessment, and referral options to non-violent offenders with substance abuse and co-occurring disorders that are referred by the judicial system as a pre-arrest diversion option. This position provides these services at the police department and in the community.

Qualifications: To perform this job successfully, an individual must be able to perform each essential function satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Essential Functions:

1. Engages and communicates effectively with consumers and families and team members.
2. Communicates and collaborates with the judicial system on an ongoing basis.
3. Schedules and completes screenings and assessments within identified timeframe to identify needs of the consumer.
4. Schedules appointments and assures all parties have relevant consents and information needed.
5. Arranges transportation for consumers if needed.
6. Speaks effectively in group situations.
7. Document all activities in the computer system within 24 hours of service.
8. Attends all departmental and center meetings/trainings as assigned.
9. Writes professional, quality reports and correspondence.
10. Adheres to confidentiality, HIPAA, and risk management policies and procedures including but not limited to completing Incident Reports.
11. Utilizes technology provided in order to perform job efficiently and effectively.
12. Tracks data for grant purposes.
13. All other duties assigned.

Job Specifications:

1. Education, Certification/License, and/or Experience

- a. Bachelor's Degree (BA) from a four-year college in Criminal Justice or Human Services Field (Psychology, Counseling, or Social Work).
- b. Valid Driver's License.
- c. Must attain/maintain certification in Non-violent Crisis Intervention and CPR/FA during employment.
- 2. **Knowledge, Skills, and Abilities required:** Experience and prior training working with mental health and substance abuse population or criminal justice system is preferred.

Physical & Mental Requirements: The physical demands described herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Essential Physical and Mental Requirements:

Physical Demands	Continuous Over 70%	Frequent 40%-69%	Occasional 15%-39%	Rarely Up to 15%
Standing		X		
Sitting			X	
Walking		X		
Climbing			X	
Bending			X	
Crouching			X	
Pushing/Pulling			X	
Carrying			X	
Lifting/Lowering 1-15 lbs.				X
15-30 lbs.				X
30-50 lbs.				X
Over 50 lbs.				X
Fine Hand/Eye Coordination	X			
Color Discrimination	X			
Hearing Acuity	X			
Visual Acuity	X			
Body Fluid Exposure			X	
Mental Demands	Continuous Over 70%	Frequent 40%-69%	Occasional 15%-39%	Rarely Up to 15%
Concentration on Detail	X			
Attention Span of 1+ hours on a Task	X			
Ability to remember multiple Tasks	X			
Oral Communication	X			
Written Communication	X			

The job duties outlined herein are general statements that describe the basic job requirements and cannot state in words every aspect of job content. Prestera Center reserves the right to modify, delete, or reclassify these duties at its sole discretion at any time.

I have read this job description and full understand the requirement set forth therein. I hereby accept the position and agree to perform the identified essential functions in accordance with established policies

and procedures. I understand all employees of Prestera Center are at-will employees, which means that employment is for no definite period and may be terminated at any time without any prior notice by either the employee or Prestera Center, with or without notice.

Print Name

Employee ID#

Employee Signature

Date

Supervisor Signature

Date

Employee Pay Rate Report

Effective 02/12/17
Pay Types - Hourly, Salary, Annual



Employee	Department	Police.DET - Police/Detective Bureau	Primary Pay Rate	Base Rate	Annual
275 BACKUS, THEODORE L JR	Yes	PO CPL - I	20.24	\$42,098.16	
1614 BILLS, SHANE N	Yes	PO SGT - I	22.11	\$45,997.33	
383 CASTLE, DAVID J	Yes	PO LT - II	23.82	\$49,553.71	
1593 COMPTON, STEPHEN M	Yes	PO SGT - I	22.11	\$45,997.33	
281 DAVIS, JASON M	Yes	PO CPL - I	20.24	\$42,098.16	
692 ELKINS, TRAVIS SCOTT	Yes	PO CPL - II	20.02	\$41,648.26	
1349 ELLIS, JOHN E	Yes	PO CAPT - I	26.18	\$54,459.81	
1347 EPIN, BRIAN M	Yes	PO SGT - III	21.64	\$45,011.82	
642 FITZ, STEPHEN CHRISTOPHER	Yes	PO CPL - I	20.24	\$42,098.16	
1004 LUCAS, BRIAN A	Yes	PO SGT - I	22.11	\$45,997.33	
694 NULL, MATTHEW A	Yes	PO SGT - II	21.88	\$45,504.58	
696 PARSONS, MARK EDWIN	Yes	PO - I	19.13	\$39,784.37	
331 QUINN, KYLE C	Yes	PO - II	18.84	\$39,184.50	
148 SPERRY, CHRISTOPHER M	Yes	PO - I	19.13	\$39,784.37	
341 YOUNG, JASON M	Yes	PO LT - I	24.06	\$50,046.46	
	Department	Police.DET - Police/Detective Bureau	Employees 15	\$669,264.34	
	Average:			\$44,617.62	
	Department	Police.DU - Police/Drug Unit			
		Yes	PO SGT - II	21.88	\$45,504.58
		Yes	PO CPL - II	20.02	\$41,648.26
		Yes	PO CPL - II	20.02	\$41,648.26
		Yes	PO - II	18.84	\$39,184.50
	Department	Police.DU - Police/Drug Unit	Employees 4	\$167,985.58	
	Average:			\$41,996.40	

PETA
WV

PLAN YEAR 2018 (July 1, 2017 - June 30, 2018) PREMIUMS

COBRA

State Agencies, County Boards of Education, Colleges and Universities

	COBRA Premiums				Average		
	Health Plan A	Health Plan B	Health Plan C	PPB Plan A	PPB Plan B	PPB Plan C	PPB Plan D
Employee Only	\$ 602	\$ 511	\$ 531	\$ 570	\$ 392	\$ 478	\$ 488
Employee and Child(ren)	\$ 827	\$ 667	\$ 690	\$ 768	\$ 515	\$ 678	\$ 659
Family	\$ 1,318	\$ 1,150	\$ 1,185	\$ 1,262	\$ 864	\$ 1,110	\$ 1,075
<i>COBRA Disability Premiums</i>							
Employee Only	\$ 885	\$ 752	\$ 782	\$ 839	\$ 577	\$ 703	\$ 717
Employee and Child(ren)	\$ 1,217	\$ 980	\$ 1,014	\$ 1,129	\$ 758	\$ 997	\$ 969
Family	\$ 1,938	\$ 1,691	\$ 1,743	\$ 1,856	\$ 1,271	\$ 1,632	\$ 1,581

Discounts:

Subtract \$25.00 if TBF Yes (Employee Only)

Subtract \$50.00 if TBF Yes (All Others)

Non-State Agencies

	COBRA Premiums				Average		
	Health Plan A	Health Plan B	Health Plan C	PPB Plan A	PPB Plan B	PPB Plan C	PPB Plan D
Employee Only	\$ 668	\$ 422	\$ 439	\$ 552	\$ 502	\$ 349	\$ 523
Employee and Child(ren)	\$ 946	\$ 624	\$ 665	\$ 1,019	\$ 908	\$ 524	\$ 978
Family	\$ 1,567	\$ 1,042	\$ 1,089	\$ 1,160	\$ 1,019	\$ 707	\$ 1,094
<i>COBRA Disability Premiums</i>							
Employee Only	\$ 983	\$ 621	\$ 645	\$ 812	\$ 738	\$ 513	\$ 770
Employee and Child(ren)	\$ 1,391	\$ 918	\$ 980	\$ 1,499	\$ 1,335	\$ 771	\$ 1,439
Family	\$ 2,304	\$ 1,533	\$ 1,602	\$ 1,706	\$ 1,499	\$ 1,040	\$ 1,610

Discounts:

Subtract \$25.00 if TBF Yes (Employee Only)

Subtract \$50.00 if TBF Yes (All Others)

**Justice and Mental Health Collaboration Program
FY 2015 Competitive Grant Application**

Budget Detail and Narrative

Budget Detail

A. Personnel

<u>NAME/POSITION</u>	<u>COMPUTATION</u>	<u>COST</u>
Law Enforcement		
Police Officers	1290hours @ \$34.60/hr	\$44625.00
Triage and Referral Coordinator	\$28000.00 x three years	\$84000.00
	Total Personnel:	\$128625.00

B. Fringe Benefits

Police Officers	Pension (8.5%)	\$4250.00
	FICA (1.45%)	\$725.00
	Worker's Comp (.80%)	\$400.00
	Total PO Fringe:	\$5375.00
Triage and Referral Coordinator		
	Pension (Retirement 401K @ wages x 0.05)	\$1400.00
	Health Insurance (Full-time staff x .2186071)	\$6120.00
	FICA (Wages x 0.0765)	\$2142.00
	Total TRC Fringe x three years:	\$28986.00
TRC Total + Fringe per year		\$37662.00
TRC Total + Fringe for three years		\$112986.00
PO Total + Fringe		\$50000.00

TOTAL Personnel **\$162986.00**

**Justice and Mental Health Collaboration Program
FY 2015 Competitive Grant Application**

Budget Detail and Narrative

C. Travel

a. Washington, DC Meetings (2)

i. Two hotel rooms for two people/ three night stay	\$4068.00
ii. Two days per diem @ \$71.00 for two people	\$284.00
iii. Two travel days per diem @ \$53.25 for 2	\$213.00
iv. Mileage @ \$.53/mile for 820 miles	\$435.00

TOTAL Travel	<u>\$5000.00</u>
---------------------	-------------------------

D. Equipment

E. Supplies

F. Construction

G. Consultants/ Contracts

Research Partner:

Center for Business and Economic Research (CBER)

\$22213.00 per year for three years (36 months)	\$66639.00
Data Collection (mandated 5%)	\$12500.00
TOTAL Consultant/ Contracts	<u>\$79139.00</u>

H. Other Costs

Mileage Expenses (misc)	\$2875.00
-------------------------	-----------

I. Indirect Costs

Match	\$50000.00
-------	------------

TOTAL Project Proposal:	<u>\$300000.00</u>
--------------------------------	---------------------------

Justice and Mental Health Collaboration Program
FY 2015 Competitive Grant Application

Budget Detail and Narrative

Budget Narrative

A. Personnel (\$128625.00)

A request of \$44625.00 will cover the cost of paying approximately 1290 hours of overtime to Police Officers at the current OT rate of \$34.60/hour.

A request of \$28000.00 will cover the cost of the base salary for a Triage and Referral Coordinator annually for three years (\$84000.00).

B. Fringe Benefits (\$34361.00)

A request of \$5375.00 will cover the cost of Pension (8.5%), FICA (1.45%), and Worker's Comp (.80%) for Huntington Police Officers.

A request of \$9662.00 will cover the cost of Pension (Retirement 401K @ wages x 0.05), Health Insurance (Full-time staff x .2186071), and FICA (Wages x 0.0765) for a Triage and Referral Coordinator for three years (\$28986.00).

C. Travel (\$5000.00)

A request of \$5000.00 will cover the costs for two individuals to attend two meetings in Washington, D.C. based on the estimated prices of two hotel rooms for two people/ three night stay, two days per diem @ \$71.00 for two people, two travel days per diem @ \$53.25 for 2, and mileage @ \$.53/mile for 820 miles (round trip from Huntington, WV).

D. Equipment

E. Supplies

F. Construction

G. Consultants/ Contracts (\$79139.00)

A request of \$79139.00 will cover the cost to hire the Center for Business and Economic Research to perform Data Analysis, Data Integrity, Data Assessment, and Comprehensive Report along with Data Collection (mandated requirement of program) over 36 months.

H. Other Costs (\$2875.00)

A request of \$2875.00 will cover miscellaneous mileage costs incurred by Triage and Referral Coordinator over the course of 36 months.

I. Indirect Costs (\$50000.00)

Programmatic requirement of 20% match will be based on a formula of Supervisory salary and percentage of time devoted to Triage and Referral Coordinator activities.

Total Project Cost **\$300000.00**

Spellman, Brooke, Jill Khadduri, Brian Sokol et al. March 2010.
Costs Associated with First-Time Homelessness for Families and Individuals.
of Policy Development and Research and Office of Special Needs Assistance

*Page ES-4, Executive
Summary*

Exhibit 1: Average Cost Per Household Per Month for Homeless Program Types^a

Individual Sites	Emergency Shelter	Transitional Housing	Permanent Supportive Housing	2006 Fair Market Rent for One-bedroom Units
------------------	-------------------	----------------------	------------------------------	---

Des Moines	\$581	\$1,018 – \$1,492	\$537	\$549
Houston	\$853 - \$1,817	\$1,654	\$664 – \$1,757	\$612
Jacksonville	\$408 - \$962	\$870	\$882	\$643

Family Sites	Emergency Shelter	Transitional Housing	Permanent Supportive Housing	2006 Fair Market Rent for Two-bedroom Units
--------------	-------------------	----------------------	------------------------------	---

District of Columbia	\$2,496 - \$3,698	\$2,146 - \$2,188	\$1,251	\$1,225
Houston	\$1,391	\$1,940 – \$4,482	\$799	\$743
Kalamazoo	\$1,614	\$813	\$881	\$612
Upstate South Carolina	\$2,269	\$1,209	\$661	\$599

Note: All costs reported in 2006 dollars.

a: Costs shown reflect weighted averages by program type. Ranges represent

b Source: (HUD, 2005)

FMR in Huntington is reported in this FY 2015-2019 CONSOLIDATED PLAN AND FY 2015 ANNUAL ACTION PLAN submitted to HUD by the City of Huntington:
https://www.cityofhuntington.com/assets/pdf/City_of_Huntington_Final_Con_Plan_and_Annual_Action_Plan.pdf. See p61:

Monthly Rent

Monthly Rent (\$)	Efficiency (no bedroom)	1 Bedroom	2 Bedroom	3 Bedroom	4 Bedroom
Fair Market Rent	\$814	\$959	\$1,156	\$1,440	\$1,546
High HOME Rent	-	-	-	-	-
Low HOME Rent	-	-	-	-	-

Table 31 – Monthly Rent

Data Source Comments:

Emergency Shelter as a % of FMR for 1-Bed	Transitional Housing as a % of FMR for 1-Bed	Supportive Housing as a % of FMR for 1-Bed	<i>Fair Market Rent for a 1- Bedroom in Huntingto n, from 2015- 2019 Plan</i>
105.8%	457.2%	97.8%	
436.3%	270.3%	395.6%	
213.1%	135.3%	137.2%	
Average % of FMR	251.7%	287.6%	210.2%
Est. Cost	\$2,414	\$2,758	\$2,016

Emergency Shelter as a % of FMR for 2-Bed	Transitional Housing as a % of FMR for 2-Bed	Supportive Housing as a % of FMR for 2-Bed	<i>Fair Market Rent for a 2- Bedroom in Huntingto n, from 2015- 2019 Plan</i>
505.6%	353.8%	102.1%	
187.2%	326.0%	107.5%	
263.7%	132.8%	144.0%	
378.8%	201.8%	110.4%	
Average % of FMR	333.8%	253.6%	116.0%
Est. Cost	\$3,859	\$2,932	\$1,341

Estimated Average Cost Per Household Per Month for Homeless Program Types in Huntington

Emergency Shelter	Transitional Housing	Supportive Housing
\$3,136.62	\$2,844.86	\$1,678.29

Data originating from City of Huntington HUD 5-Year Plan.

Will assume Fair Market Rent values from this document are in 2015 dollars.

SUBSTANCE USE & MISUSE
Vol. 39, Nos. 13 & 14, pp. 2581–2609, 2004

The Value of Vocational Rehabilitation in Substance User Treatment: A Cost-Effectiveness Framework

Donald S. Shepard* and Sharon Reif

Schneider Institute for Health Policy, Heller School, Brandeis
University, Waltham, Massachusetts, USA

ABSTRACT

Vocational rehabilitation (VR) programs within addiction treatment traditionally consider employment as the desired outcome. This singular focus ignores other benefits, such as reduced substance use. A framework for evaluating the cost-effectiveness of VR within addiction treatment is presented and illustrated with data from the Alcohol and Drug Services Study (ADSS, 1996–1999). VR was associated with a 2.5% increase in probability of abstinence at an \$883 increase in cost per admission. Thus, the estimated cost-effectiveness of VR in promoting abstinence is \$35,000 per additional abstinent client (\$883/0.025), indicating that VR is a cost-effective contributor to other goals of addiction treatment.

2002 \$5

*Correspondence: Donald S. Shepard, Schneider Institute for Health Policy, Heller School, MS 035, Brandeis University, Waltham, MA 02454-9110, USA; Fax: 781-736-3928; E-mail: Shepard@brandeis.edu.



2582

Shepard and Reif

Key Words: Vocational rehabilitation; Cost-effectiveness; Employment; Outcomes; Substance use.

INTRODUCTION AND BACKGROUND

Vocational rehabilitation programs (VR) provided in conjunction with substance user counseling, as part of professional and mutual help treatment models and programs, have traditionally been evaluated using employment as the expected outcome. However, many clients may not achieve full-time employment, leading some observers to conclude that VR has limited efficacy. An alternate perspective is that this singular focus on employment as the only outcome from VR programs is misdirected, and that other positive outcomes often result. These include abstinence, crime reduction, education, and participation in healthy relationships.

A primary reason to include VR along with substance user treatment is that employment may be considered a means of social integration (Kerrigan et al., 2000; Platt, 1995), which can be essential for clients in recovery, as a means of reintroducing them to the "real world" (Platt, 1995). In addition, most models of recovery include the impact of an individual's environment as a major aspect of a client's life that must be addressed in order to treat addiction; employment falls into this category and work skills become integral to successful treatment (Room, 1998).

Comerford (1999) considers substance misuse and vocational dysfunction to have similar roots in self-efficacy, or the belief in one's ability to solve problems, be successful, or to positively effect change in one's life. Substance user treatment often uses cognitive therapies to develop self-efficacy, with the accompanying improvements in self-esteem and expectations of outcomes. Development of self-efficacy is also enhanced by the development of problem-solving and decision-making skills, as well as the identification and development of specific interests, beliefs, and values. "With both career and addictions counseling, it would seem that the objective to provide individuals with the tools, information, and motivational context that will enable them to make good—self-enhancing—decisions moving forward holds true" (Comerford, 1999). Once self-efficacy is developed, additional services can help maintain this attitude. These same skills also relate to work habits, and conversely, vocational activities can contribute to the sense of self-efficacy via awareness of being productive and valued. This process considers and builds upon the strengths, limitations, knowledge, skills, and abilities that





Cost-Effectiveness of VR Within Addiction Treatment

2583

each individual has during and prior to treatment, in order to develop a level that can be maintained by the client following treatment.

In addition to the overarching concept of self-efficacy, vocational activities can relate directly to psychological functioning and motivation for recovery (French et al., 1992; Kingree, 1997). Clients who are employed after treatment report more perceived control over their lives, and less depression, when controlling for these variables at admission to treatment (Kingree, 1997). Self-esteem is also enhanced by employment (Kerrigan et al., 2000; Platt et al., 1998; Schottenfeld et al., 1992), which may decrease substance misuse. Improved self-confidence, economic well-being, enhanced social functioning, and enhanced social status all stem from obtaining and retaining gainful employment (Schottenfeld et al., 1992) and the income generated from that employment, and can also have a resulting positive effect on substance misuse. Decreases in criminality and substance misuse may also result from employment (Schottenfeld et al., 1992). Employment provides a legal source of income and legitimate activities (Platt et al., 1998), and earned income can lead to a reduction in criminal activity (Platt, 1995). However, some individuals function in both the employed and the criminal worlds, as there are rewards to each. Income may be greater via illegal activities than via legal employment, for instance, while legal employment may emphasize a greater sense of accomplishment. The quality, appropriateness, and effectiveness of the transition to the legal world should thus be considered as a client's progress is reviewed.

Richert and Merryman (1987) suggest that vocational rehabilitation be conceptually considered a continuum, ranging from prevocational activities such as basic skills (social interaction, problem-solving, hygiene) through vocational preparation activities (resume writing, interview skills) to actual vocational experience (supported work, volunteer work, employment). This continuum is dynamic and multidimensional, allowing for ongoing feedback and adjustments. Where a client fits along this continuum depends on his or her employment history as well as cognitive stage, competencies, limitations, and external conditions such as the current job market.

Vocational rehabilitation can help clients develop realistic views of their skills, abilities, and limitations, and develop coping skills and other competencies (Platt, 1995; Schottenfeld et al., 1992). Similarly, work adjustment programs improve self-confidence, help to further develop a realistic sense of abilities, and increase motivation within a supportive environment (Schottenfeld et al., 1992). Specific techniques used within VR, such as group activities, also reinforce some broader skills such as social interaction (Richert and Merryman, 1987).





2584

Shepard and Reif

This article presents a conceptual framework leading to a focus on other outcomes, such as reductions in substance misuse and crime, or improvements in mental health and interpersonal relationships, as well as a broader range of potential employment outcomes. Based on the conceptual framework, a cost-effectiveness methodology is developed to examine the full impact of vocational rehabilitation. An empirical example examines the cost of treatment per enrollment day, as a function of the presence of vocational rehabilitation.

CONCEPTUAL FRAMEWORK

Employment Outcomes

Traditional studies of the efficacy of vocational rehabilitation (VR) have focused on employment as the primary outcome. Often this outcome has been interpreted as paid employment, at a minimum, and competitive employment more generally, and often full-time work. Although it is agreed that paid, competitive employment is the ultimate desired outcome of VR, there are several reasons why it should not be the only employment outcome considered. First, there may be a threshold effect, in which competitive employment is only possible once a minimum level of skills is attained. Again, this may be the ultimate goal, but VR may lead to improvements that are below this threshold, or are nonvocational, which therefore would not be observed with this singular outcome. Second, there may be external factors limiting the ability to obtain paid, competitive employment. For instance, the job availability in a locality may be extremely limited in number or in scope (French et al., 1992). Employers are often reluctant to hire individuals with a substance misuse and/or criminal history, reducing the likelihood of finding a job in the competitive marketplace (Arella et al., 1990; Brewington et al., 1987) or increasing the likelihood of losing a current job; however, this may not be as much of an issue when other means of employment, such as volunteer, seasonal or nonlegal work, are considered. Third, employment during and after substance user treatment is directly related to employment at admission (Richert and Merryman, 1987). Thus, employment after treatment may only be an indication of pre-admission status, not of the VR received. As mentioned above, clients who were not employed at admission may still show advances in their vocational functioning, even if they are less likely to be employed following treatment.

An alternative to this narrow perspective shows employment and vocational activities as a spectrum of degrees of employment. The low





Cost-Effectiveness of VR Within Addiction Treatment

2585

end of the spectrum is unemployment, with no gainful vocational activities or earned income. The high end of the spectrum is full-time, paid competitive employment. A client's employment can be quantified in several ways, including the number of hours worked, income earned (total, or legal only), and type of employment. Hours worked is a particularly important measure for nonpaid activities. Between the ends of the spectrum are numerous indicators of some gainful activities, which may be a positive result of participation in VR. These include volunteer work, supported work, part-time or seasonal work, and off-the-books work. Participation in school, self-help activities, or even parenting or child care could be interpreted as productive time on this spectrum, that could eventually be shifted to work-oriented activities. The amount of time per week in gainful activities, or the length of time employed or in gainful activities may also contribute to the spectrum. Along these lines, Arella et al. (1990) coded clients as essentially full-time vocational/educational (V/E) involved, marginally V/E involved, or not V/E involved (either explained, such as a homemaker, or unexplained). Another schema codes clients as consistently employed, typically employed, inconsistently employed, typically unemployed, or consistently unemployed (Platt, 1995). Other schemas incorporate finer distinctions, such as volunteer, part-time, and full-time work, the legitimacy or legality of the work, and the type of work done. Regardless of the schema used, each employment outcome could be obtained via self-report and/or confirmed with outside sources such as the employer or family members.

When considering employment as an outcome, it is essential to understand that the barriers to employment vary by individual, are often out of the individual's control, and may be overwhelming. These barriers occur at the client level, at the program level, and at the structural or environmental level (Brewington et al., 1987; French et al., 1992). French et al. (1992) provide some examples. At the client level, obstacles can range from family problems, to lack of social skills, to lack of work experience and training, to unrealistic goals. Program-level barriers include problems such as inflexible treatment schedules and lack of referral to VR. Structural barriers occur more at a societal level, such as bias against substance users, labor market problems, and lack of funding for long-term training or VR. Another way of considering obstacles is to consider those that are related to gaining employment, such as poor interviewing skills, and those related to maintaining employment, such as interpersonal problems (Schottenfeld et al., 1992). Overcoming some obstacles is possible, and can be integrated into both treatment and VR goals. For instance, lack of social skills is relevant to the goals of





2586

Shepard and Reif

treatment and VR, whereas minimal work experience is mostly a barrier dealt with in VR, and less so in treatment.

Given these barriers, an expectation of immediate, paid, competitive employment may be unrealistic and could potentially contribute to relapse or a return to other problem behaviors, due to a sense of failure or lack of motivation to participate in VR. Alternatively, small successes related to different VR goals may be much more encouraging for the client. An absence of adequate problem solving skills exacerbates stress and anxiety; if in the workplace, lack of skills, and emotional stress may result in work failure (Platt, 1995). Arella et al. (1990) point out that even though vocational activities are seen as integral to client progress, they are generally not integrated into the substance user counseling. Therefore, vocational-related problems are not addressed adequately within treatment, which can lead to relapse. Loss of a job is also often associated with relapse (Platt, 1995).

Nonemployment Outcomes

In addition to the obvious vocational rehabilitation outcomes that center on employment, there are many other outcomes that may result not only from treatment participation, but also from vocational rehabilitation in particular. Outcomes that are of interest include substance use, either abstinence or reduced use; treatment participation, such as length of stay, treatment compliance, treatment completion, participation in aftercare, and participation in self-help activities; criminal activity, such as days involved with illegal activities, income from illegal sources, arrests, and other involvement with the criminal justice system; reliance on government supports such as welfare, disability or unemployment, as measured by the presence of subsidies, the number of subsidies, and the amount received. Mental health status and interpersonal relationships may also show improvement related to VR, as could other outcomes such as health status, daily functioning, community participation, and leisure activities. These other outcomes are important to consider, not only because of the issues related to employment outcomes discussed above, but also because nonemployment outcomes may be particularly relevant to family, friends, and society.

As we develop the conceptual framework, we present a series of models representing a traditional perspective of VR (with a focus on employment as the only outcome) and a revised comprehensive model of VR (with a focus on employment and other outcomes, with many points of reinforcement). The models build upon each other, demonstrating the





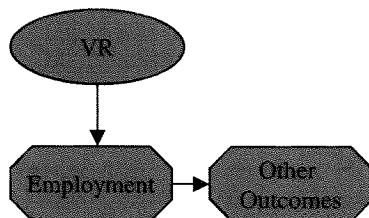
role of services (VR and other), shown as ovals, of developed competencies (rectangles), outcomes (octagonal rectangles), and abstinence (diamonds).

Pathways to Nonemployment Outcomes

Conceptually, improvement in nonemployment outcomes due to VR could occur via two general pathways. The traditional model is indirect, occurring only through the impact of VR on employment. That is, VR improves specific employment outcomes, and those employment outcomes have a direct positive impact on other outcomes. An example of this could be a reduction in criminal activity: if a client is employed or has increased income as a result of VR, that client is less likely to have reason to acquire money via illegal means, thus will be less likely to participate in illegal activities. Reduced reliance on government subsidies results from a similar process, where employment increases income, and thus decreases the need for subsidized income. Model 1a, in Fig. 1, represents the pathway suggested by these examples.

It is also possible that improvement in nonemployment outcomes following VR could occur independently, as shown in Model 1b. An example of this direct pathway could be an improvement in relationships, where the skills learned in VR, such as interviewing skills or social skills relevant to employee-employer relationships, could be applied to other situations, such as treating family members with respect and learning to listen to what they have to say, thus improving those relationships. In this way, VR leads directly to improvements in the client's relationships, regardless of the employment outcomes. This pathway could also be

**Model 1a. Traditional Model:
Indirect Effect**



**Model 1b. Comprehensive Model:
Direct Effect**

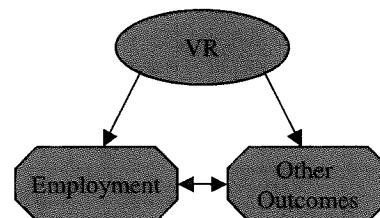


Figure 1. Effect of VR on nonemployment outcomes.





relevant for outcomes related to crime, substance misuse, mental health, and treatment participation. Improvement occurs independent of employment, via improved self-esteem, skills, confidence, self-efficacy, or other such mechanisms, as discussed in the next section. The use of a double-headed arrow in Model 1b also indicates that improvements in one outcome reinforce gains on other outcomes. That is, employment increases the likelihood of other positive outcomes (such as reduced crime), and other positive outcomes (such as a stable living situation) in turn increase the likelihood of employment.

Development of Specific Competencies

Considering these pathways to outcomes in further detail suggests that the key is the development of specific competencies via VR. Competencies may be defined as the skill sets needed to attain specific goals or outcomes. For example, a skill set for obtaining a job would include the ability to find appropriate job openings, to fill out an application or write a resume, and to participate in an interview process. Once these skills are acquired, the client could be considered to have a competency specific to obtaining a job.

What is the impact of VR on life competencies vs. employment competencies? The traditional model for evaluating VR focuses on the employment competencies only (Fig. 2, Model 2a). For example, VR can teach interviewing skills that are directly relevant to employment. Our comprehensive model suggests that VR impacts both employment competencies and life competencies, which can overlap and reinforce each other to some degree (Model 2b). For example, a complete VR

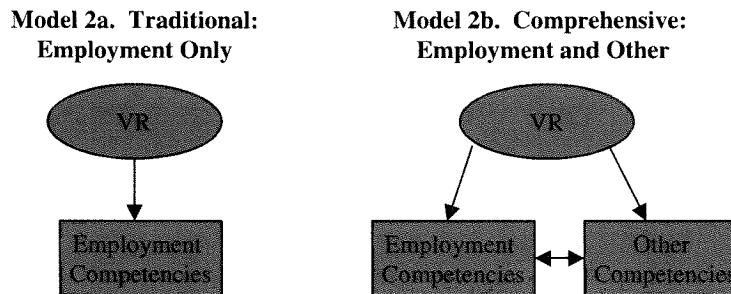


Figure 2. Role of VR in developing competencies.





program can teach both specific vocational skills, such as resume writing, and broader skills of developing successful relationships and keeping commitments, which are not only essential as an employee, but also for other aspects of the client's life. Another example is that the skills developed for job interviews enhance self-confidence, which is a competency for improving other life domains, such as mental health or relationships.

How Can VR Impact Life Competencies?

Figure 3 combines the prior two figures to demonstrate how specific competencies are developed along the pathways leading to improved outcomes. Vocational rehabilitation may only develop competencies that are specific to employment, in which case the only direct impact is on employment, as shown in Model 3a. An indirect effect on other outcomes can occur from the direct effect of VR on employment. Using the examples from above, VR develops the skills for employment, and employment creates income, which can reduce the reliance on crime or on government subsidies. These outcomes thus occur indirectly from VR, through employment. Another example of this pathway is an effective, trusting relationship with a supervisor, which can function as an example of respectful and successful relationships, and serve to improve relationships with family and friends.

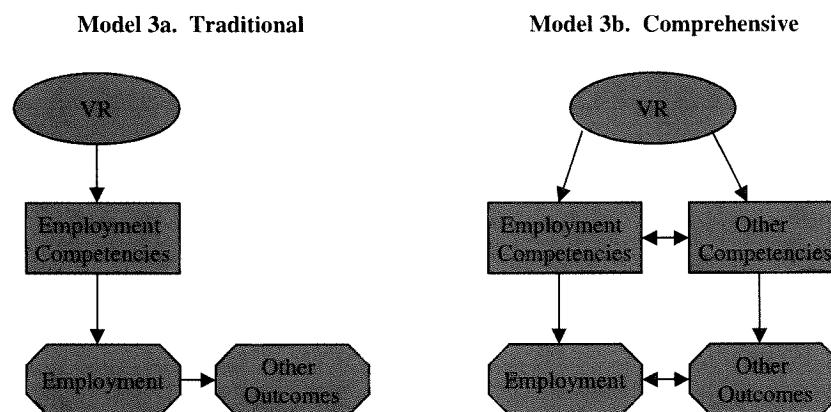


Figure 3. Impact of VR on specific competencies and outcomes.



2590

Shepard and Reif

Alternatively, the comprehensive model, Model 3b, indicates that VR can directly develop competencies that are relevant to other outcomes. For example, VR could directly develop specific skills intended to improve the relationship of an employee and his or her supervisor, which is a competency directly related to employment. However, these skills can also function as a competency specific to the area of relationships, with a direct effect on relationships the person has with family and friends. By contrast, in the traditional pathway (Model 3a), the VR-developed competency leads to employment, which can affect other outcomes.

Abstinence as Prerequisite to Vocational Rehabilitation

The final conceptual consideration in the development of a comprehensive model of VR and outcomes relates to the role of abstinence from all drugs and alcohol. Traditional vocational rehabilitation programs, particularly those offered in methadone maintenance treatment, often require abstinence as a prerequisite for participating in the VR program for various reasons (Fig. 4, Model 4a). For instance, sending substance users to certain jobs can potentially have social damage. Also, the reputation of the treatment facility could be damaged if the job or training site requires abstinence, but nonabstinent clients are referred to them. Abstinence may also be considered a sign of

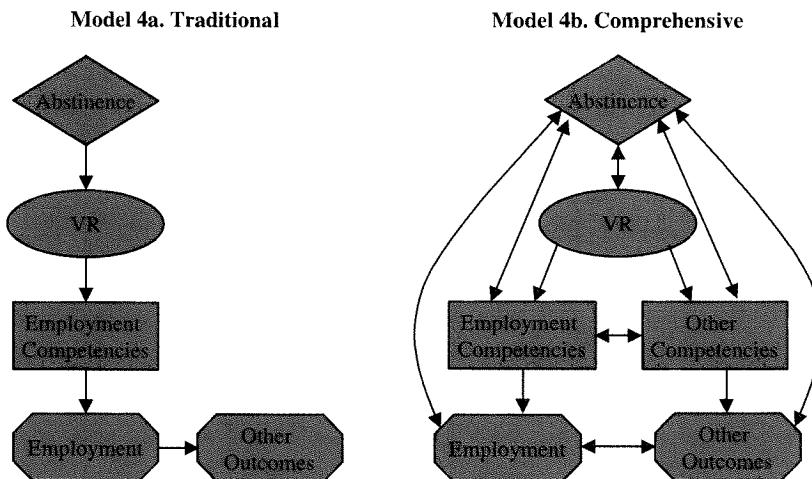


Figure 4. Role of abstinence in relationship to VR and outcomes.





Cost-Effectiveness of VR Within Addiction Treatment

2591

motivation for all clients, thus indicating readiness to participate in VR and employment.

However, abstinence may not be a realistic and useful requirement, as it may limit participation by the clients most in need of vocational rehabilitation. If the clients most in need of VR also have the most trouble with abstinence, requiring abstinence limits the impact of VR on the neediest clients. The requirement of abstinence also presumes that it is possible for that client to achieve it, without addressing potential causes of the continued substance use, such as chronic unemployment. It raises the question of whether abstinence can be attained and/or maintained within the environment of treatment as usual. One alternative is that the requirement could be imposed later in the rehabilitation process, such as prior to return to work or job-seeking, but not prior to receipt of VR services. For example, impaired doctors, children's coaches, childcare workers, or transportation workers would have a requirement of abstinence prior to returning to work, but that requirement need not be met prior to starting VR. Our comprehensive model, Model 4b, suggests that abstinence may actually occur via VR, as part of the development of the specific competencies, both employment and life-skills related, as well as via any outcomes. There is continual and bidirectional feedback between abstinence, VR, competencies, and outcomes.

Effect of VR vs. Substance User Counseling

It is worth considering the effect of VR, as compared to the effect of substance user counseling, if VR can develop competencies that affect outcomes other than employment, as is the intention of substance user counseling. Essentially, it is expected that VR will have an effect on some competencies, and counseling should have an effect on and/or will facilitate some competencies, and that these developed competencies may overlap greatly or only somewhat. The degree of overlap will depend on the specifics of the VR and treatment programs, as well as the individual's needs and baseline competencies. Vocational rehabilitation can serve either as a complement to substance user counseling, or to reinforce competencies developed during that counseling, or it can do both. For instance, in methadone treatment, there is little focus on individual counseling, thus participation in VR may require development of very basic skills that might be addressed in other types of substance user treatment; these developed skills may then overlap more with traditional goals and outcomes of treatment. A program in which VR is





2592

Shepard and Reif

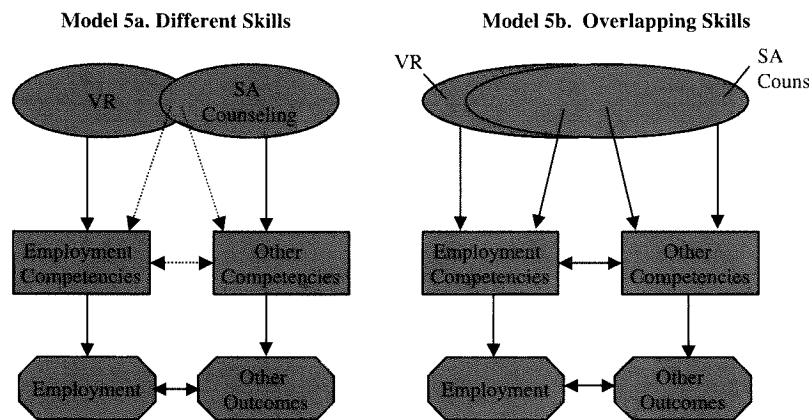


Figure 5. Overlap of competencies developed in VR and substance abuse counseling in the comprehensive model.

an adjunct to substance user treatment, where the treatment focuses on general competencies and VR focuses on employment-specific competencies, will have much less overlap of those competencies. In terms of individual needs, a client who has a low level of basic skills and has been unemployed for a period will require different goals from VR than a client who has had a successful employment history and is trying to reenter the work force; the first client may thus have more overlap of competencies from VR and counseling, whereas the second client is likely to have little overlap.

Figure 5 illustrates this concept. In Model 5a, treatment and VR occur in tandem, and overlap only slightly, each contributing mostly different types of skills to the client's set of competencies. In this model, the main pathways from VR and counseling are indicated by the solid arrows, and the supplementary pathways are indicated by the dashed arrows between the overlap of VR and counseling and both competencies. Alternatively, in Model 5b, treatment overlaps much more with the specific VR service, and so the contribution to skills is based on some level of reinforcement of similar skills from both occurrences, as well as from development of distinct competencies. In this model, the equal contribution of each pathway is indicated by solid arrows for each. If one of the aims of VR is to develop skills that transfer to a real-life setting (Room, 1998), this suggests a larger overlap, as the skills should apply to both employment and life competencies. Although the figure indicates the impact of VR and counseling as equal, by using ovals of the same size,



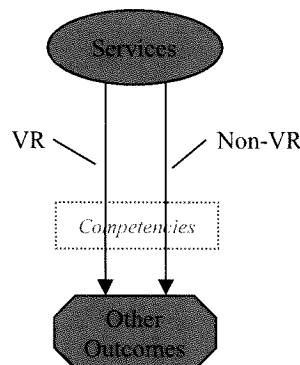


it does not need to occur this way; generally, VR may be a much smaller focus in the development of competencies, as would be indicated by an oval that is smaller than counseling. One conclusion resulting from this model is that treatment planning should involve a determination of what competencies a client needs to develop, and what degree of overlap or differentiation between the substance user counseling and the VR is needed for the client to achieve these specific goals. Without such a focus of an individual's needs and abilities, implementation of even the highest quality VR program will be difficult for that individual.

Cost-Effectiveness

As discussed in the previous sections, there are numerous outcomes that could be used to evaluate the effectiveness of VR, ranging from measures of employment and earnings, to treatment participation, to substance use, to mental health and relationships. However, to evaluate cost-effectiveness, it is necessary to choose only one outcome, or to create one composite outcome. This cost-effectiveness example will determine the impact of VR on nonemployment outcomes (Fig. 6, Model 6a) and also the impact of VR on costs (Model 6b). As developed in the conceptual model, competencies are an essential element of the pathway from VR to outcomes. However, these are not measured in this example, so are shown in the background of Model 6a. Together, Models 6a and 6b allow a calculation of the cost-effectiveness of VR.

Model 6a. Effectiveness



Model 6b. Costs

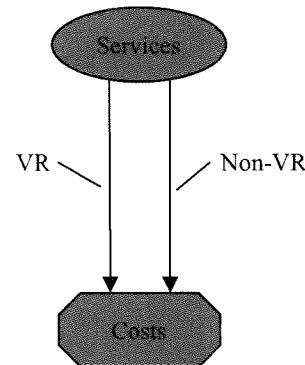


Figure 6. Cost effectiveness, using other outcomes in the comprehensive model.





2594

Shepard and Reif

BRIEF COST-EFFECTIVENESS EXAMPLE

Methods

The empirical examples within this article use data from the Alcohol and Drug Services Study (ADSS). The ADSS, funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), is a nationally representative study of the specialty substance user treatment system from 1996 to 1999 (Horgan and Levine, 1998; Horgan et al., 2001; Lee et al., 2001). The ADSS was conducted in three phases: Phase I was a survey of 2394 treatment facilities to obtain information on the organization (such as ownership, setting, affiliation, and licensure), staffing, services, and financial characteristics of the facilities. Phase II collected further facility information on a subset of 280 Phase I facilities, and a sample of treatment records of 5005 discharged residential and outpatient nonmethadone maintained clients, and in-treatment methadone maintained clients, were abstracted. The ADSS cost study was conducted on the Phase II facilities, where an intensive call-back procedure was used to accurately ascertain and verify the costs of substance user treatment facilities (Shepard and Beaston-Blaakman, 1999; Shepard et al., 1999; Shepard et al., 2003). Phase III consisted of follow-up interviews with the 1802 clients whose treatment records were sampled; this interview included sections on the time periods before, during, and after the sampled treatment episode. Both the treatment record abstract and the follow-up interview included client background characteristics, including employment, substance misuse, and criminal justice involvement, and characteristics of the treatment episode. While Phase III relies on self-report, urine samples were also collected, which enhance the validity of self-reported substance use in studies of substance users (Sherman and Bigelow, 1992; Zanis et al., 1994). Although the urine results confirm only current drug use, if a client is truthful about current use, other information may be more likely to be reliable (Del Boca and Noll, 2000). Analyses comparing self-report of substance use to urine results in ADSS found very little disagreement, indicating that clients are accurately reporting their substance use (Reif, 2002).

Data from the Alcohol and Drug Services Study (ADSS) (Substance Abuse and Mental Health Services Administration, 2002) thus allow an examination not only of client outcomes, in terms of whether VR was received, but also the costs of treatment. Although ADSS included several treatment modalities, for consistency this example only includes outpatient nonmethadone treatment, which is the most prevalent modality in the specialty substance user treatment system. While VR is





Cost-Effectiveness of VR Within Addiction Treatment

2595

often provided within methadone treatment, limiting our sample to outpatient nonmethadone treatment allows a focus on the majority of substance misuse clients in the treatment system. This sample includes 222 facilities that provide outpatient nonmethadone care and 756 discharged outpatient nonmethadone clients sampled from those facilities; weighted, these represent 9165 outpatient nonmethadone facilities, and 719,036 outpatient nonmethadone clients. Descriptive analyses characterize the sample by demographic and background characteristics.

Among the numerous domains in ADSS were the services offered by facilities, and the services received by sampled clients. Vocational rehabilitation was labeled as "employment counseling" in ADSS, and responses were yes/no to whether the facility provided it, and whether the client received it. Facility-level information was obtained by a mail/phone survey with the facility director. Client information was obtained from a follow-up survey and from abstracts of the treatment record; VR was coded as received if it was either noted in the treatment record or reported by the client. Without further information about the quality or intensity of the VR received, it is assumed that VR in this study will represent what is typically offered in substance user treatment, rather than the more intensive services available in pilot or research programs. While this measure of the receipt of VR is developed from both program records and client report, it would be strengthened by additional specific information from the program staff, such as the client's level of involvement in VR; this level of detail was not available in this dataset. Descriptive tables were created to characterize the clients in the sample by certain vocational-related characteristics, and to compare clients who received VR to clients who did not receive VR by these characteristics.

Determination of cost-effectiveness requires two measures: one of cost, and one of outcome (or effectiveness). Although cost-effectiveness is sometimes used to analyze measures for cost reduction, it is generally applied to programs or services that improve outcomes, albeit at higher cost (Shepard and Thompson, 1979). In this situation, in order to demonstrate cost-effectiveness, it is necessary to show effectiveness of the service or intervention in question. That is, VR must have an impact on an outcome (effectiveness) before cost-effectiveness can be estimated.

In a few cost-effectiveness studies, a single data set is sufficient to show the relationship between a service and an improved health state. More commonly, however, direct study data can show the impact of the service only on an intermediate variable. Findings from other studies are used to relate the intermediate to the final outcome. In the area of physical health, a classic example is the control of cardiovascular risk factors such as smoking, blood pressure, and cholesterol. Some studies show that





2596

Shepard and Reif

counseling, medications, diet, or exercise reduce these risk factors, while others show the relation between the risk factors and cardiovascular morbidity and mortality (Taylor et al., 1990).

An often-used outcome in substance user treatment effectiveness research is abstinence at a defined follow-up point. However, in this sample, effectiveness of VR was not established for the abstinence outcome. Therefore, we consider an alternative process for estimating the effect of VR on abstinence. Treatment duration is a variable that has been demonstrated to be predictive of outcomes, including abstinence and reduction of substance use following treatment, in a number of studies (Condelli and Hubbard, 1994; Gottheil et al., 1998; Hubbard et al., 1989; Simpson, 1979; Simpson et al., 1997). We can use this relationship to estimate the effectiveness of VR on abstinence, based on the effectiveness of VR for duration of treatment. Therefore, treatment duration is the intermediate effectiveness measure for this example; cost is defined as the cost per episode, based on the number of admissions at the sampled facility. Both treatment duration and cost per episode are skewed, so the analyses use log-transformations of each variable.

Two primary weighted linear regression models are presented, one with log(duration) as the dependent variable, and one with log(cost) as the dependent variable. The key independent variable in each model is VR, with the resulting research questions being: (1) Does receipt of VR by a client affect the duration of treatment? and (2) Does provision of VR by a facility affect the cost of a treatment episode? The outcome analysis, predicting log(duration), is done at the client level, and includes both facility and client characteristics as control variables. The cost analysis, predicting log(cost), is done at the facility level, and includes several other facility characteristics as controls. Stepwise techniques were used to pare down the models. A third, intermediate model is presented that relates log(duration) to abstinence. Given the complex multistage clustered sampling design of ADSS, the statistical program WesVar (Westat, 2000) was used, which allows accurate calculation of standard errors. For the purposes of this article, parsimonious models of treatment duration and abstinence were used; for further detail on the impact of VR on treatment duration and abstinence, see Reif et al. in this issue of *Substance Use & Misuse* (2004).

RESULTS

Descriptive Analyses

Characteristics of the clients in this sample are described in Table 1, with comparisons made across clients who did and did not receive VR.





Cost-Effectiveness of VR Within Addiction Treatment

2597

Table 1. Description of the client sample.^a

Percent of clients	Percent of clients		
	All clients 100	Received VR 9.7	Did not receive VR 90.3
Gender			
Male	78.7	80.1	78.5
Female	21.3	19.9	21.5
Age (years)			
Mean	34.2	35.3	34.1
Median	33.2	35.6	33
Hispanic/Latino ^b	14.5	6.6	15.3
Race ^c			
White	71.5	46.4	74.3
Black	24.5	53.0	21.3
Other	4.0	0.6	4.6
Married or cohabitating at admission	42.2	32.9	43.2
High school diploma or GED ^b			
Diploma	48.9	46.2	49.2
GED	21.6	17.7	22.0
Neither	29.4	36.2	28.6
Never attended school	0.2	0	0.2
Years of education			
Mean	11.4	11.4	11.4
Median	11.2	11.3	11.2
Homeless (at least 2 nights) past 12 months ^d	4.9	20.9	3.2
Ever arrested	88.8	85.2	89.2
Primary substance			
Heroin	4.4	6.2	4.1
Cocaine ^d	22.9	53.0	19.7
Alcohol ^d	62.9	32.4	66.2
Marijuana	7.9	4.0	8.3
Ever worked a full-time job ^b	84.6	76.5	85.5
Longest full-time job (if ever FT)			
Less than 1 year	12.4	7.5	12.8
1 to 2 years	16.9	11.7	17.4
More than 2 but less than 5 years	19.6	29.2	18.7
5 years or more	51.2	51.6	51.1

^aWeighted univariate analysis. The actual number of observations was 756 (unweighted N), while the weighted number of observations was 719,036.

^b*p* < 0.05.

^c*p* < 0.001.





2598

Shepard and Reif

On average, the clients in this sample were about 34 years old. More than three-quarters were men, 15% identified their ethnicity as Hispanic, 71% identified their race as white, 25% as black, and 4% as other races. Most (70%) had completed high school or received a GED; the mean reported years of education was 11.4. The vast majority (85%) reported having a full-time job at some point in their lives, with more than half having worked at one full-time job for 5 years or longer. Current employment and income status are presented in Tables 2 and 3, below. Clients in this sample have a high level of involvement with the criminal

Table 2. Employment at admission and receipt of employment counseling for outpatient non-methadone clients.^a

Percent of clients	Percent of clients			Odds ratio Likelihood of receiving VR
	All clients 100	Received VR 9.7	Did not receive VR 90.3	
Employment status in year before admission				
Any full-time work	67.2	47.0	69.1	0.4 ^d
Only part-time work	15.7	18.1	15.5	1.2
Unemployed	17.1	34.9	15.4	2.9 ^c
Type of full-time work				
Professional/technical	3.4	10.7	3.0	3.9 ^b
Laborer	19.4	30.0	18.7	1.9
Manager/administrator	3.8	6.3	3.6	1.8
Clerical	3.1	4.9	3.0	1.7
Transportation	5.9	8.3	5.8	1.5
Service	15.4	20.1	15.1	1.4
Sales	5.5	5.5	5.5	1.0
Machine operator	9.1	4.9	9.3	0.5
Skilled or craftsmen	23.8	9.4	24.8	0.3
Private household	3.2	0	3.4	0
Farm laborer	3.9	0	4.1	0
Lay counselor	0.2	0	0.2	0
Farmer or farm mgr	0	0	0	0
Other	3.2	0	3.4	0
Total	99.9	100.1	99.9	—

^aWeighted univariate analysis. The actual number of observations was 756 (unweighted N), while the weighted number of observations was 719,036.

^b $p < 0.05$.

^c $p < 0.01$.

^d $p < 0.001$.





Cost-Effectiveness of VR Within Addiction Treatment

2599

Table 3. Income measures at admission and receipt of employment counseling, for residential and outpatient nonmethadone clients.^a

Percent of clients	Percent of clients			Odds ratio
	All clients	Received VR	Did not receive VR	
	100	5.6	94.4	—
Income in year before admission				
Less than \$20,000	71.6	71.5	71.7	1
\$20,000 or more	28.4	28.5	28.3	1
Mean	\$16,294	\$13,591	\$16,566	[<i>t</i> = non-sig]
25th percentile	\$4,311	\$1,729	\$4,575	
Median	\$11,546	\$5,470	\$11,968	
75th percentile	\$20,737	\$19,584	\$20,829	
Income sources (not mutually exclusive)				
Other welfare assistance	3.6	8.7	3.0	3.1 ^b
Supplemental security (SSI)	5.6	11.8	5.0	2.5 ^b
Government (includes AFDC)	10.3	19.8	9.3	2.4 ^c
Food stamps	20.5	33.3	19.1	2.1 ^c
Social security or RR	4.8	7.0	4.6	1.6
Disability payments (VA, SSDI, worker's comp, etc.)	4.5	5.0	4.4	1.1
Earned interest or income from rent, royalties, trusts	10.8	9.6	10.9	0.9
Wages or pay from employment	73.5	53.8	75.5	0.4 ^d
Unemployment compensation	5.7	1.5	6.1	0.2
Alimony or child support	2.9	0.2	3.2	0.1
Retirement or survivor pension	1.9	0	2.1	0

^aWeighted univariate analysis. The actual number of observations was 756 (unweighted N), while the weighted number of observations was 719,036.

^b*p* < 0.05.

^c*p* < 0.01.

^d*p* < 0.001.

justice system, with just under 90% reporting at least one arrest. Alcohol was the primary substance for 63% of clients, cocaine for 23%, heroin for 4%, marijuana for 7% of clients, and others for 3%.

The clients who received VR differed significantly from clients who did not on several of these background characteristics. Those who received VR were less likely to be Hispanic, white, to have alcohol as their primary substance, and to have ever worked a full-time job. Clients who received VR were more likely to be black, homeless, to have





2600

Shepard and Reif

neither a diploma nor a GED, and to have cocaine as their primary substance.

The ADSS data allow a detailed examination of the employment characteristics of clients in the specialty substance user treatment system, including whether or not they received VR as part of the treatment episode (Tables 2 and 3). Table 2 shows that out of all clients discharged from outpatient nonmethadone treatment, just under 10% received VR. These clients were significantly less likely to have had a full-time job in the year prior to admission to substance user treatment (47 vs. 69% of those who did not receive VR). Alternatively, they were more likely to be unemployed throughout the year prior to admission than those who did not receive VR (35 vs. 15%). Although there are apparent differences between those clients who did and did not receive VR, according to the type of full-time work they did prior to admission, only professional/technical work was significant. There is face validity, however, in that clients in the service industries, clerical workers, and those who were laborers had higher rates of VR, indicating that of clients who worked, those in the less skilled jobs were targeted to some degree for VR. The somewhat counterintuitive finding that professionals had higher rates of VR may be related to awareness of and/or seeking out of VR by these clients.

Table 3 examines income measures as related to receipt of VR. Although not significant, trends for income go in the expected direction, where clients who received VR were slightly more likely to have income below \$20,000 and less likely to have incomes above \$20,000 compared to clients who did not receive VR, but these differences were not significant. The mean and quartile distribution of the income levels show the same pattern. Confirming that VR is received by people more in need is that clients who received VR were significantly more likely to have received welfare, SSI, food stamps, or other government assistance than clients who did not receive VR. At the other end, they were less likely to have received income from wages or employment. Other findings on this table, though nonsignificant, are in the expected directions.

Cost-Effectiveness Analysis

The preceding discussion shows that there are significant differences between clients who did and did not receive VR. This illustrative evaluation of VR sought to control for these differences to avoid confounding the impact of VR with the characteristics of clients who receive it. In this study, we used stepwise multiple logistic regression to





Cost-Effectiveness of VR Within Addiction Treatment

2601

Table 4. Effect of VR on treatment duration.^a

Independent variable	B	p
Intercept	3.30	<0.001
Received VR	0.78	0.007
Unemployed throughout year before admission	0.17	0.407
Years of education	-0.03	0.321
Facility offered low number of treatment services	0.88	<0.001
Age at admission to treatment (years)	0.02	0.070
Client self-referred to treatment	-0.56	0.046
Alcohol is primary substance	0.32	0.049

^aWeighted analysis with dependent variable natural log of treatment duration (in days). The actual number of observations was 654 (unweighted N), while the weighted number is 641,931. The R^2 is 0.147.

separate these effects. At the beginning of the methods section, it was suggested that treatment duration was an appropriate intermediate variable for this cost-effectiveness analysis.

The first analysis thus examines the effectiveness of VR, when using duration as the outcome of interest. As Table 4 shows, VR has a significant and positive impact on duration of treatment. That is, when controlling for other factors, clients who received VR had longer duration of treatment than clients who did not receive VR. Exploratory analyses (not shown) found no interaction effect between VR and unemployment.

Table 5 shows the impact of the intermediate variable (duration) on the outcome (abstinence). Specifically, logistic regression showed that a 10% increase in treatment duration is associated with a 0.019 increase in the probability of abstinence, when controlling for gender and age. The relationship in Tables 4 and 5 allows us to compute the probability of abstinence for an average client with and without VR. The average client in this data set is a male, aged 34.2, employed, with alcohol as primary substance of user, treated in a facility with medium to high level of treatment services, and was not a self-referral to treatment. This average client had an average stay of 252 days if he received VR and 115 days without VR. These arithmetic averages were computed by using the relationship in Table 4 to determine the predicted value of $\log(\text{duration})$, exponentiating the log (which gives a geometric mean), and expanding the result based on the estimated variance in duration. Entering these average stays in the equation in Table 5, we estimate the probabilities of abstinence for this client as 22.8% with VR and 20.3% without VR.



**Table 5.** Effect of treatment duration on abstinence.^a

Independent variable	B	p
Intercept	-3.33	<0.001
Log (treatment duration)	0.19	0.042
Age (years)	0.03	0.015
Gender (female)	0.82	<0.001

^aWeighted logistic regression analysis with dependent variable abstinence at follow-up. The actual number of observations was 716 (unweighted N), while the weighted number is 682,535. Given weights, WesVar measures goodness-of-fit using an F test, rather than χ^2 . The F is 8.11 ($p < 0.0001$).

Table 6. Effect of VR on facility average cost per admission.^a

Independent variable	B	p
Intercept	6.64	<0.001
Facility offered VR	0.50	0.001
Number of treatment services available	0.09	0.022
Number of support services available	0.01	0.746
Ratio of clients to direct care staff	-0.01	0.021

^aWeighted analysis of facilities with dependent variable natural log of cost per treatment episode. The actual number of observations was 216 (unweighted N), while the weighted number is 8,909. The R^2 is 0.267.

Vocational rehabilitation also has a significant and positive impact on the cost of an episode (Table 6). This can be interpreted as facility provision of VR leads to an increase of 0.50 in the natural logarithm of cost per admission, corresponding to an increase in cost for each client by a factor of 1.65 (the exponential of 0.50). Results from the cost model are presented in Table 6.

Table 7 shows the computation of the cost-effectiveness ratio. The impact of VR on cost was calculated as the difference in predicted cost for an average client with VR (\$2245) and without VR (\$1362). The impact of VR on abstinent years was based on a natural history study that showed the median "time to readdiction" following abstinence was 3 years in the median county studied (Hser and Anglin, 1991). Thus, a 1% improvement in probability of abstinence was associated with an expected gain of 0.03 abstinent years. The cost-effectiveness ratio for

wave \$883





Cost-Effectiveness of VR Within Addiction Treatment

2603

Table 7. Cost-effectiveness of VR.

	With VR	Without VR	Difference	Cost-effectiveness ^a
Cost ^b	\$2,245	\$1,362	\$883	—
Probability of abstinence ^c	0.228	0.203	0.025	\$35,000
Abstinent years ^d	0.684	0.609	0.075	\$12,000

^aCost-effectiveness is calculated as the difference in cost divided by the difference in outcome (probability of abstinence or abstinent years).

^bCost estimates are derived from Table 6.

^cProbability of abstinence is derived from Table 5.

^dAbstinent years are calculated by multiplying the probability of abstinence by the expected number of abstinent years, in this case 3 years (see text).

abstinence was calculated as the difference in cost divided by the difference in probability of abstinence, or \$883/0.025, or \$35,000. The cost-effectiveness ratio for abstinent years was calculated as the difference in cost divided by the difference in expected abstinent years, or \$883/0.075, or \$12,000.

To interpret these cost-effectiveness ratios, it is useful to compare them with those for other substance user services. For a client with middle-severity substance misuse (comparable to the average client in this study), the cost-effectiveness of treatment, compared to detox alone, ranged from \$14,000 to \$73,000 per abstinent year (Shepard et al., 1999). That study, based in Ohio, followed a generally similar approach to ADSS. It was an observational study of an unselected population in representative treatment settings with about 1 year of follow-up data. The most favorable value in the range from the Ohio study (\$14,000) corresponded to regular outpatient treatment, compared to no follow-up after detox.

The comparison of the Ohio and ADSS data allow, in effect, a comparison between standard and enhanced outpatient treatment. The Ohio data show that standard outpatient treatment, compared to no treatment, improved the probability of abstinence by 10.6% at an average cost per client of \$1486. The analysis of VR with ADSS data shows that the VR enhancement increased the probability of abstinence by 2.5% at an increase in cost of \$883. Thus, enhanced outpatient treatment is about 25% better, but about 61% more costly, than standard outpatient treatment. Compared to the benefits of substance user treatment (French et al., 2002), these added costs are likely a worthwhile investment by society.





2604

Shepard and Reif

CONCLUSION

This article presented a conceptual framework for exploring the cost-effectiveness of VR provided within substance user treatment, with a comprehensive focus on outcomes such as reductions in substance use and crime, or improvements in relationships and mental health, as well as a range of employment outcomes. We illustrated this framework with the example of VR within outpatient nonmethadone treatment in the Alcohol and Drug Services Study (ADSS). Vocational rehabilitation was associated with a 2.5% increase in probability of abstinence at an \$883 increase in cost per admission. Thus, the estimated cost-effectiveness of VR in promoting abstinence is \$35,000 per additional abstinent client (\$883/0.025), indicating that VR is a cost-effective contributor to other goals of substance user treatment. This framework suggests that VR can be valued not only in its traditional role of promoting employment, but also as a cost-effective contributor to other goals of substance user treatment. Using this framework, further analyses could identify the types of clients and types of VR that are most cost-effective.

The cost-effectiveness analysis in this article is only one example of how VR could be analyzed. Multiple potential outcomes could be considered, such as crime, relationships, and mental health, and other employment. A recent dissertation has suggested how all these measures could be combined into a single Quality Adjusted Life Year (QALY), as is done in physical health (Bury-Maynard, 1999). Also, other ways of measuring costs could be considered. The overall cost per admission is the basic cost variable of interest at the facility level, but cost per week adjusted for the number of visits could also provide useful information, as the number of visits per week is expected to be directly affected by the provision of VR. Similarly, personnel costs should be affected by VR at a facility, as additional personnel time is required for VR. These alternative cost analyses would provide additional information about the mechanism through which VR affects overall costs.

Finally, some economic analyses, such as French et al. (2002), use benefit-cost analyses instead of cost-effectiveness analysis. Under that approach, all benefits such as employment, reduced crime, lower health costs, or improved relationships, are expressed in monetary terms. For instance, the dollars earned from legal employment could be a key outcome stemming from VR. Benefit cost analysis, like the cost-effectiveness analysis, can incorporate the comprehensive model in which indirect benefits of VR on areas such as crime are merged with the direct effects. The challenge in benefit-cost analysis is assigning a dollar value to the improvement in the quality of life of the client, his

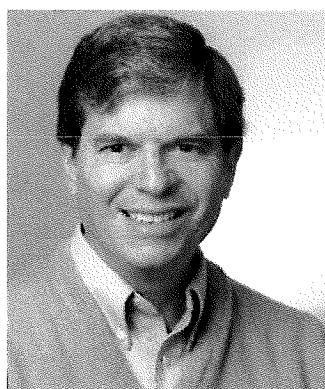


**Cost-Effectiveness of VR Within Addiction Treatment****2605**

friends, and family from a reduction in substance use. Both techniques, however, can value VR as not only a means towards employment, but towards a broader effort at a client's reintegration into society.

ACKNOWLEDGMENTS

Supported in part by grants from the National Institute on Alcohol User and Alcoholism (5R01-AA-10341) and the National Institute on Drug User (5R01-DA10262) through subcontracts from the University of Pennsylvania, and from The Robert Wood Johnson Foundation (# 040213). ADSS was conducted by Brandeis University and Westat, under SAMHSA contract # 283-92-8331 (Constance M. Horgan, P.I.). The authors thank Graham Staines and Stephen Magura for their thoughtful comments on this article.

THE AUTHORS

Donald S. Shepard, Ph.D., is Professor at the Schneider Institute for Health Policy at the Heller School, Brandeis University. Director of the Institute's Cost-Effectiveness Group, he is a health economist concerned with health problems of both the United States and developing countries. His major concentrations are cost and cost-effectiveness analysis in health, and health financing. After receiving his B.A. magna cum laude with highest honors at Harvard, Dr. Shepard earned

a Master of Public Policy and a Ph.D. in Public Policy from the Kennedy School of Government at Harvard University. Particularly interested in the cost-effectiveness of new technologies, he is a member of Board of Councilors for the Pediatric Dengue Vaccine Institute and the Board of Scientific Advisors of the Sabin Vaccine Institute, both dedicated to new and improved vaccines. He served as a member of peer review "study section" that reviews grant applications to the National Institutes of Health in health services research for scientific merit. With funding from the Massachusetts Division of Medical Assistance and the National Institutes of Health, he was Principal Investigator (PI) or Co-PI of the





2606

Shepard and Reif

evaluation of a restructuring of mental health and substance user services in the state. He is the lead evaluator of two national demonstrations for the Medicare Program. Prof. Shepard's research focuses on the cost-effectiveness of alternative approaches to substance user treatment, lifestyle modification, prescription drug coverage, and AIDS care. He also holds adjunct or visiting faculty appointments at the Boston and Brown Universities.



Sharon Reif, Ph.D., is a Senior Research Associate at the Schneider Institute for Health Policy at Brandeis University. Dr. Reif received her Ph.D. in social policy from the Heller School for Social Policy and Management at Brandeis University in 2002; her dissertation examined the role of ancillary services in substance abuse treatment outcomes. She received a training grant from the National Institute of Alcohol Abuse and Alcoholism (NIAAA) while in the doctoral program at the Heller

School. She has over 14 years of experience in the field of substance abuse research, including project management, client interviews, data analysis, and manuscript preparation. Recently, Dr. Reif was the project manager for an RWJ grant covering ongoing analyses of the Alcohol and Drug Services Study (ADSS), with a focus on the specialty substance abuse treatment system, and the clients within that system. This work stemmed out of her participation under the original contract to conduct and perform analyses for ADSS. Dr. Reif is currently the project manager on a CSAT study of the relationship of financing and cost issues with access to substance abuse treatment. Her primary research interests center around what happens to clients in and following substance abuse treatment.

REFERENCES

Arella, L. R., Deren, S., Randell, J., Brewington, V. (1990). Structural factors that affect provision of vocational/educational services in methadone maintenance treatment programs. *Journal of Applied Rehabilitation Counseling* 21(2):19–26.





Cost-Effectiveness of VR Within Addiction Treatment

2607

Arella, L. R., Deren, S., Randell, J., Brewington, V. (1990). Vocational functioning of clients in drug treatment: exploring some myths and realities. *Journal of Applied Rehabilitation Counseling* 21(2):7–18.

Brewington, V., Arella, L., Deren, S., Randell, J. (1987). Obstacles to the utilization of vocational services: an analysis of the literature. *International Journal of the Addictions* 22(11):1091–1118.

Bury-Maynard, D. (1999). *Developing a Utility Index for Substance User: theory and Application*. Waltham, MA: Heller School for Studies in Advanced Social Welfare, Brandeis University.

Comerford, A. W. (1999). Work dysfunction and addiction: common roots. *Journal of Substance Abuse Treatment* 16(3):247–253.

Condelli, W. S., Hubbard, R. L. (1994). Relationship between time spent in treatment and client outcomes from therapeutic communities. *Journal of Substance Abuse Treatment* 11(1):25–33.

Del Boca, F. K., Noll, J. A. (2000). Truth or consequences: the validity of self-report data in health services research on addictions. *Addiction* 95(Suppl 3):S347–S360.

French, M. T., Dennis, M. L., McDougal, G. L., Karuntzos, G. T., Hubbard, R. L. (1992). Training and employment programs in methadone treatment: client needs and desires. *Journal of Substance Abuse Treatment* 9:293–303.

French, M. T., Salomé, H. J., Sindelar, J. L., McLellan, A. T. (2002). Benefit-cost analysis of addiction treatment: methodological guidelines and empirical application using the DATCAP and the ASI. *Health Services Research* 37(2):433–455.

Gottheil, E., Weinstein, S. P., Sterling, R. C., Lundy, A., Serota, R. D. (1998). A randomized controlled study of the effectiveness of intensive outpatient treatment for cocaine dependence. *Psychiatric Services* 49(6):782–787.

Horgan, C. M., Levine, H. J. (1998). The substance abuse treatment system: what does it look like and whom does it serve? Preliminary findings from the Alcohol and Drug Services Study. In: Institute of Medicine, ed. *Bridging the Gap Between Practice and Research*. Washington, D.C.: National Academy Press, pp. 186–197.

Horgan, C. M., Reif, S., Ritter, G. A., Lee, M. T. (2001). Organizational and financial issues in the delivery of substance abuse treatment services. In: Galanter, M., ed. *Recent Developments in Alcoholism, Services Research in the Era of Managed Care*. Vol. 15. New York: Plenum Publishing, pp. 9–26.

Hser, Y.-I., Anglin, M. D. (1991). Cost-effectiveness of drug abuse treatment: relevant issues and alternative longitudinal modeling approaches. In: Cartwright, W. S., Kaple, J. M., eds. *Economic Costs*,





Cost-Effectiveness, Financing, and Community-Based Treatment (NIDA Research Monograph 113). Rockville, MD: US DHHS.

Hubbard, R. L., Marsden, M. E., Rachal, J. V., Harwood, H. J., Cavanaugh, E. R., Ginzburg, H. M. (1989). *Drug Abuse Treatment: a National Study of Effectiveness.* Chapel Hill: University of North Carolina Press.

Kerrigan, A. J., Kaough, J. E., Wilson, B. L., Wilson, J. V., Boeringa, J. A., Monga, T. N. (2000). Vocational rehabilitation outcomes of veterans with substance use disorders in a partial hospitalization program. *Psychiatric Services* 51(12):1570–1572.

Kingree, J. B. (1997). The role of vocational behaviors preceding and during 12-step oriented treatment. *Journal of Substance Abuse Treatment* 14(6):575–579.

Lee, M. T., Reif, S., Ritter, G.A., Levine, H. J., Horgan, C. M. (2001). Access to services in the substance abuse treatment system: variations by facility characteristics. In: Galanter, M., ed. *Recent Developments in Alcoholism, Services Research in the Era of Managed Care.* Vol. 15. New York: Plenum Publishing, pp. 137–156.

Platt, J. J. (1995). Vocational rehabilitation of drug users. *Psychological Bulletin* 117(3):416–433.

Platt, J. J., Widman, M., Lidz, V., Rubenstein, D., Thompson, R. (1998). The case for support services in substance abuse treatment. *American Behavioral Scientist* 41(8):1050–1063.

Reif, S. (2002). The Impact of Ancillary Services on Substance Abuse Treatment Outcomes. Ph.D. dissertation, Heller School of Social Policy and Management, Brandeis University, Waltham, MA.

Reif, S., Horgan, C. M., Ritter, G. A., Tompkins, C. P. (2004). The impact of employment counseling on substance user treatment participation and outcomes. *Substance Use and Misuse.* This issue.

Richert, G. Z., Merryman, M. B. (1987). The vocational continuum: a model for providing vocational services in a partial hospitalization program. *Occupational Therapy in Mental Health* 7(3):1–20.

Room, J. A. (1998). Work and identity in substance abuse recovery. *Journal of Substance User Treatment* 15(1):65–74.

Schottenfeld, R. S., Pascale, R., Sokolowski, S. (1992). Matching services to needs: vocational services for substance abusers. *Journal of Substance Abuse Treatment* 9:3–8.

Shepard, D. S., Beaston-Blaakman, A. (1999a). The substance abuse treatment system. What does treatment cost? Cost study methods in the Alcohol and Drug Services Study (ADSS) abstracts. In: Abstracts, 127th Annual Meeting and Exposition, American





Cost-Effectiveness of VR Within Addiction Treatment

2609

Public Health Association, (Chicago: IL, November 7–11, 1999); American Public Health Association Session 1163, p. 51.

Shepard, D. S., Thompson, M. S. (1979). First principles of cost-effectiveness analysis in health. *Public Health Reports* 94(6):535–543.

Shepard, D. S., Beaston-Blaakman, A., Bennett, R. B. (1999b). Cost of substance abuse treatment: a national probability sample. In: Abstracts, 16th Annual Meeting of the Association for Health Services Research, (Chicago: IL, June 27–29, 1999); Association for Health Services Research, Abstract No. 571.

Shepard, D. S., Beaston-Blaakman, A., Horgan, C. M. (2003). The ADSS Cost Study: Costs of Substance Abuse Treatment in the Specialty Sector. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies.

Shepard, D. S., Larson, M. J., Hoffmann, N. G. (1999). Cost-effectiveness of substance abuse services. *Psychiatric Clinics of North America* 22(2):385–400.

Sherman, M. F., Bigelow, G. E. (1992). Validity of patients' self-reported drug use as a function of treatment status. *Drug and Alcohol Dependence* 30:1–11.

Simpson, D. D. (1979). The relation of time spent in drug abuse treatment to posttreatment outcome. *American Journal of Psychiatry* 136(11):1449–1453.

Simpson, D. D., Joe, G. W., Brown, B. S. (1997). Treatment retention and follow-up outcomes in the Drug User Treatment Outcome Study (DATOS). *Psychology of Addictive Behaviors* 11(4):294–307.

Substance Abuse and Mental Health Services Administration. Alcohol and Drug Services Study [data files]. ICPSR <public use files available online: www.icpsr.umich.edu>. (Data accessed 2002).

Taylor, W. C., Pass, T. M., Shepard, D. S., Komaroff, A. L. (1990). Cost effectiveness of cholesterol reduction for the primary prevention of coronary heart disease in men. In: Goldbloom, R. B., Lawrence, R. S., eds. *Preventing Disease: Beyond the Rhetoric*. New York: Springer-Verlag, pp. 437–441.

Westat. (2000). *Wesvar 4.0 User's Guide*. Rockville, MD: Westat.

Zanis, D. A., McLellan, A. T., Randall, M. (1994). Can you trust patient self-reports of drug use during treatment. *Drug and Alcohol Dependence* 35:127–132.



Request Permission or Order Reprints Instantly!

Interested in copying and sharing this article? In most cases, U.S. Copyright Law requires that you get permission from the article's rightsholder before using copyrighted content.

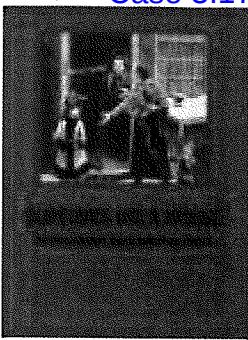
All information and materials found in this article, including but not limited to text, trademarks, patents, logos, graphics and images (the "Materials"), are the copyrighted works and other forms of intellectual property of Marcel Dekker, Inc., or its licensors. All rights not expressly granted are reserved.

Get permission to lawfully reproduce and distribute the Materials or order reprints quickly and painlessly. Simply click on the "Request Permission/Order Reprints" link below and follow the instructions. Visit the [U.S. Copyright Office](#) for information on Fair Use limitations of U.S. copyright law. Please refer to The Association of American Publishers' (AAP) website for guidelines on [Fair Use in the Classroom](#).

The Materials are for your personal use only and cannot be reformatted, reposted, resold or distributed by electronic means or otherwise without permission from Marcel Dekker, Inc. Marcel Dekker, Inc. grants you the limited right to display the Materials only on your personal computer or personal wireless device, and to copy and download single copies of such Materials provided that any copyright, trademark or other notice appearing on such Materials is also retained by, displayed, copied or downloaded as part of the Materials and is not removed or obscured, and provided you do not edit, modify, alter or enhance the Materials. Please refer to our [Website User Agreement](#) for more details.

Request Permission/Order Reprints

Reprints of this article can also be ordered at
<http://www.dekker.com/servlet/product/DOI/101081JA200034732>



Substance Use & Misuse

ISSN: 1082-6084 (Print) 1532-2491 (Online) Journal homepage: <https://www.tandfonline.com/loi/isum20>

The Value of Vocational Rehabilitation in Substance User Treatment: A Cost-Effectiveness Framework

Donald S. Shepard & Sharon Reif

To cite this article: Donald S. Shepard & Sharon Reif (2004) The Value of Vocational Rehabilitation in Substance User Treatment: A Cost-Effectiveness Framework, *Substance Use & Misuse*, 39:13-14, 2581-2609, DOI: [10.1081/JA-200034732](https://doi.org/10.1081/JA-200034732)

To link to this article: <https://doi.org/10.1081/JA-200034732>



Published online: 03 Jul 2009.



Submit your article to this journal [↗](#)



Article views: 165



View related articles [↗](#)



Citing articles: 16 [View citing articles](#) [↗](#)

*

NEWS RELEASE

BUREAU OF LABOR STATISTICS
U. S. DEPARTMENT OF LABOR



For release 10:00 a.m. (EDT) Thursday, March 19, 2020

USDL-20-0451

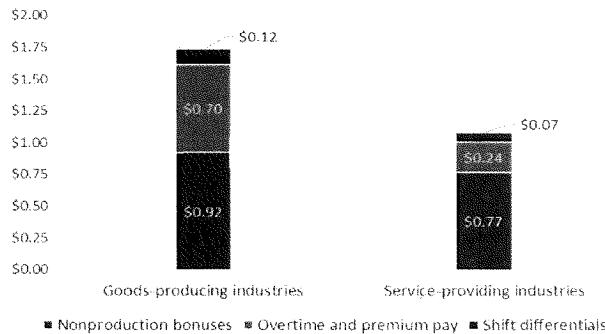
Technical information: (202) 691-6199 • ncsinfo@bls.gov • www.bls.gov/ect
Media contact: (202) 691-5902 • pressoffice@bls.gov

EMPLOYER COSTS FOR EMPLOYEE COMPENSATION – DECEMBER 2019

Private industry employers spent an average of \$34.72 per hour worked for total employee compensation in December 2019, the U.S. Bureau of Labor Statistics reported today. Wages and salaries averaged \$24.36 per hour worked and accounted for 70.1 percent of these costs, while benefit costs averaged \$10.37 and accounted for the remaining 29.9 percent. (See table 1.)

Within total benefits, **supplemental pay** costs averaged \$1.19 per hour worked or 3.4 percent of total compensation. Supplemental pay includes employer costs for employee **shift differentials** (extra payments for working a non-traditional work schedule) that averaged \$0.08 (0.2 percent), **overtime and premium pay** (pay for work in addition to the regular work schedule) that averaged \$0.31 (0.9 percent), and **nonproduction bonuses**¹ (such as holiday bonuses or end-of-year bonuses which are given at the discretion of the employer and are not tied to a production formula) at \$0.79 (2.3 percent). (See chart 1 and table 1.)

Chart 1. Private industry supplemental pay components costs per employee hour worked, December 2019



Supplemental pay costs for **goods-producing** industry workers averaged \$1.74 per hour worked or 4.4 percent of total compensation, including \$0.12 for shift differentials (0.3 percent), \$0.70 for overtime and premium pay (1.8 percent), and \$0.92 (2.3 percent) for nonproduction bonuses. Supplemental pay costs in goods-producing industries ranged from \$1.36 (3.4 percent) in construction to \$1.91 (4.9 percent) in manufacturing. (See chart 1, table 4, and the database query tool at www.bls.gov/ncs/ect/data.htm.)

Supplemental pay costs for **service-providing** industry workers averaged \$1.07 per hour worked or 3.2 percent of total compensation, including \$0.07 (0.2 percent) for shift differentials, \$0.24 (0.7 percent) for overtime and premium pay and \$0.77 (2.3 percent) for nonproduction bonuses. Supplemental pay costs averaged \$0.24 in the leisure and hospitality industry with a relative standard error (RSE) of 13.1 percent corresponding to a 90 percent confidence interval of \$0.19 to \$0.29. In the financial activities industry, supplemental pay costs averaged \$2.92 with an RSE of 10.4 percent corresponding to a 90 percent confidence interval of \$2.42 to \$3.42. (See chart 2, table 4, the technical note, and the database

¹ See access to all nonproduction bonuses types at www.bls.gov/ncs/ebs/benefits/2019/benefits_other.htm

query tool at www.bls.gov/ncs/ect/data.htm.)

Chart 2. Private industry employer supplemental pay percent of total compensation, December 2019

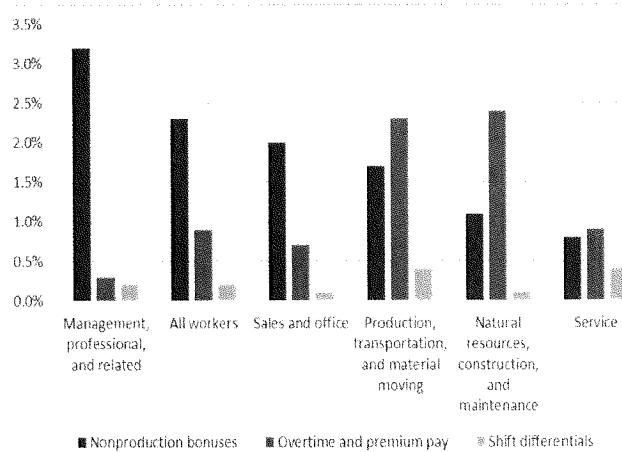
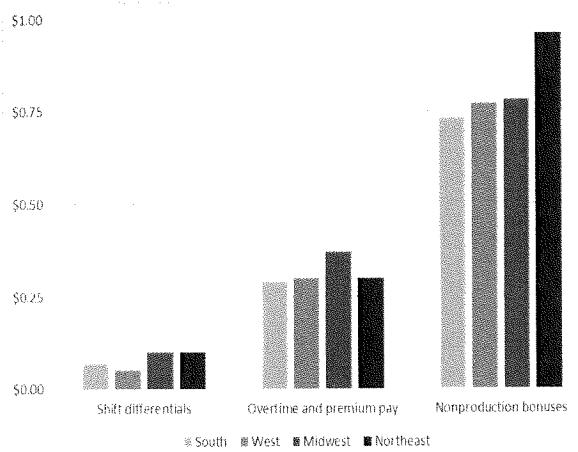


Chart 3. Supplemental pay components costs per hour worked by census region, December 2019



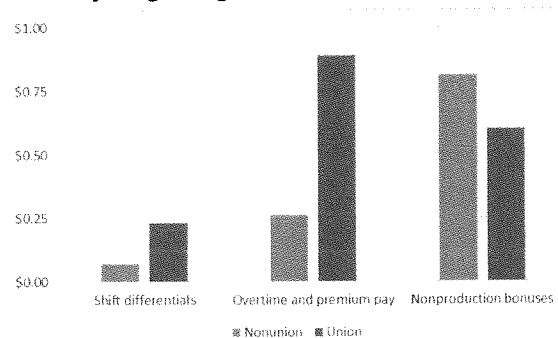
Within occupational groups, employer supplemental pay costs for **management, professional, and related** workers averaged \$2.22 per hour worked or 3.7 percent of total compensation including \$0.12 (0.2 percent) for shift differentials, and \$0.18 (0.3 percent) for overtime and premium pay. The largest employer cost portion of supplemental pay was \$1.92 (3.2 percent) for nonproduction bonuses.

Employer supplemental pay costs for **natural resources, construction, and maintenance workers** averaged \$1.35 (3.7 percent). Shift differential costs were \$0.05 (0.1 percent), nonproduction bonuses were \$0.41 (1.1 percent), and overtime and premium pay \$0.89 (2.4 percent). (See chart 2, table 4, and the database query tool at www.bls.gov/ncs/ect/data.htm.)

Among census regions, employer costs for supplemental pay ranged from \$1.09 per hour worked or 3.6 percent of total compensation in the South to \$1.36 (3.5 percent) in the Northeast. Employer costs for shift differentials in the Midwest averaged \$0.10 (0.3 percent) and \$0.10 (0.2 percent) in the Northeast. Overtime and premium pay costs were \$0.29 (0.9 percent) in the South and \$0.37 (1.1 percent) in the Midwest regions. Employer costs for nonproduction bonuses ranged from \$0.73 (2.4 percent) in the South to \$0.96 (2.4 percent) in the Northeast. (See chart 3, table 7, and the database query tool at www.bls.gov/ncs/ect/data.htm.)

Supplemental pay employer costs averaged \$1.14 per hour worked or 3.4 percent of total compensation for **nonunion** workers and \$1.72 (3.6 percent) for **union** workers. Overtime and premium costs were the largest component of supplemental pay for union workers averaging \$0.89 (1.8 percent), while nonproduction bonus costs were the largest share of supplemental pay for nonunion workers averaging \$0.81 (2.4 percent). (See chart 4, table 5, and the database query tool at www.bls.gov/ncs/ect/data.htm.)

Chart 4. Employer supplemental pay components costs by bargaining status, December 2019



Other highlights in private industry (See table 1.)

- **Paid leave** averaged \$2.53 per hour worked or 7.3 percent of total compensation. Average costs for paid leave components include \$0.14 for **personal leave** (0.4 percent), \$0.34 for **sick leave** (1.0 percent), \$0.75 for **holiday leave** (2.2 percent), and \$1.30 for **vacation leave** (3.8 percent).
- **Insurance** benefits averaged \$2.76 per hour worked or 8.0 percent of total compensation. Average costs for insurance components include \$0.04 for **life insurance** (0.1 percent), \$0.04 for **long-term disability** (0.1 percent), \$0.07 for **short-term disability** (0.2 percent), and \$2.61 for **health insurance** (7.5 percent).
- **Retirement and savings** averaged \$1.22 per hour worked or 3.5 percent of total compensation. Average costs for retirement and savings components include \$0.42 for **defined benefit** (1.2 percent) and \$0.80 for **defined contribution** (2.3 percent).
- **Legally required benefits** averaged \$2.66 per hour worked or 7.7 percent of total compensation, including \$2.05 or 5.9 percent of total compensation for **social security and Medicare**, \$0.03 per hour (0.1 percent) for **federal unemployment insurance**, \$0.14 per hour (0.4 percent) for **state unemployment insurance**, and \$0.45 (1.3 percent) for **workers' compensation**.

Note: The sum of individual compensation components may not equal totals due to rounding.

Employer Costs for Employee Compensation for March 2020 is scheduled to be released on Thursday, June 18, 2020, at 10:00 a.m. (EDT).

TECHNICAL NOTE

Employer Costs for Employee Compensation (ECEC), a product of the National Compensation Survey, provides the average employer cost for wages and salaries as well as benefits per employee hour worked. The ECEC covers the civilian economy, which includes data from both private industry and state and local government. Excluded from private industry are the self-employed, agricultural workers, and private household workers. Federal government workers are excluded from the public sector.

All workers are included in the benefit cost estimates including those that do not have plan access or do not participate. Costs are also affected by other factors such as cost sharing between employers and employees, plan features, and plan generosity. For the latest information on the percentage of workers with access to and participating in employer-sponsored benefit plans, including health care and retirement and savings plans, see www.bls.gov/ebs.

The “National Compensation Measures” provides additional details on the sample design, calculation methodology, and resources explaining changes over time. (See www.bls.gov/opub/hom/ncs/home.htm.)

Additional ECEC estimates, including historical data, are available in the ECEC database query tool at www.bls.gov/ncs/ect/data.htm.

Sample size: Data for this reference period were collected from a probability sample of approximately 25,500 occupational observations selected from a sample of about 6,300 private industry establishments and approximately 7,800 occupational observations selected from a sample of about 1,400 state and local government establishments that provided data at the initial interview.

Measures of reliability: Relative standard errors provide users a tool to judge the quality of an estimate to ensure that it is within an acceptable range for their intended purpose. Available at www.bls.gov/web/ecec.supp.toc.htm and database query tool at www.bls.gov/ncs/ect/data.htm.

Comparisons: Compensation cost levels in state and local government should not be directly compared with levels in private industry. Differences between these sectors stem from factors such as variation in work activities and occupational structures.

Publication focus: Topics of news releases for the upcoming reference periods are as follows:

- March 2020 - Compensation costs by wage percentile and 15 metropolitan areas
- June 2020 - Health benefit costs in private industry
- September 2020 - Compensation costs in state and local government

For the 2020 ECEC release dates, see www.bls.gov/schedule/news_release/ecec.htm.

Table 1. Employer Costs for Employee Compensation by ownership
 [Dec. 2019]

Compensation component	Civilian workers ¹	Private industry workers	State and local government workers			
	Cost (\$)	Percent of compensation	Cost (\$)	Percent of compensation	Cost (\$)	Percent of compensation
Total compensation ²	37.10	100.0	34.72	100.0	52.14	100.0
Wages and salaries.....	25.47	68.6	24.36	70.1	32.50	62.3
Total benefits.....	11.63	31.4	10.37	29.9	19.63	37.7
Paid leave.....	2.72	7.3	2.53	7.3	3.89	7.5
Vacation.....	1.33	3.6	1.30	3.8	1.47	2.8
Holiday.....	0.80	2.2	0.75	2.2	1.11	2.1
Sick.....	0.43	1.2	0.34	1.0	1.01	1.9
Personal.....	0.16	0.4	0.14	0.4	0.31	0.6
Supplemental pay.....	1.09	2.9	1.19	3.4	0.51	1.0
Overtime and premium ³	0.30	0.8	0.31	0.9	0.22	0.4
Shift differentials.....	0.07	0.2	0.08	0.2	0.05	0.1
Nonproduction bonuses.....	0.72	1.9	0.79	2.3	0.24	0.5
Insurance.....	3.22	8.7	2.76	8.0	6.08	11.7
Life.....	0.05	0.1	0.04	0.1	0.07	0.1
Health.....	3.06	8.3	2.61	7.5	5.93	11.4
Short-term disability.....	0.06	0.2	0.07	0.2	0.03	0.1
Long-term disability.....	0.04	0.1	0.04	0.1	0.05	0.1
Retirement and savings.....	1.92	5.2	1.22	3.5	6.30	12.1
Defined benefit.....	1.17	3.1	0.42	1.2	5.85	11.2
Defined contribution.....	0.75	2.0	0.80	2.3	0.45	0.9
Legally Required benefits.....	2.69	7.2	2.66	7.7	2.86	5.5
Social Security and Medicare.....	2.07	5.6	2.05	5.9	2.24	4.3
Social Security ⁴	1.65	4.4	1.64	4.7	1.71	3.3
Medicare.....	0.42	1.1	0.41	1.2	0.53	1.0
Federal unemployment insurance.....	0.02	0.1	0.03	0.1	— ⁵	— ⁶
State unemployment insurance.....	0.13	0.4	0.14	0.4	0.06	0.1
Workers' compensation.....	0.46	1.2	0.45	1.3	0.56	1.1

¹ Includes workers in the private nonfarm economy except those in private households, and workers in the public sector, except the federal government.

² Includes costs for wages and salaries and benefits.

³ Includes premium pay for work (such as overtime, weekends, and holidays) in addition to the regular work schedule.

⁴ Social Security refers to the Old-Age, Survivors, and Disability Insurance (OASDI) program.

⁵ Cost per hour worked is \$0.01 or less.

⁶ Less than .05 percent.

Table 2. Employer Costs for Employee Compensation for civilian workers by occupational and industry group
 [Dec. 2019]

Series	Total compensation ¹	Wages and salaries	Total benefits	Paid leave	Supplemental pay	Insurance	Retirement and savings	Legally required benefits
	Cost (\$)	Percent	Cost (\$)	Percent	Cost (\$)	Percent	Cost (\$)	Percent
Civilian workers ²	37.10	100.0	25.47	68.6	11.63	31.4	2.72	7.3
Occupational group								
Management, professional, and related.....	61.28	100.0	41.84	68.3	19.44	31.7	5.27	8.6
Management, business and financial.....	69.73	100.0	47.63	68.3	22.10	31.7	6.67	9.6
Professional and related.....	57.48	100.0	39.24	68.3	18.25	31.7	4.63	8.1
Teachers ³	65.17	100.0	44.33	68.0	20.84	32.0	3.44	5.3
Primary, secondary, and special education school teachers.....	64.87	100.0	43.11	66.5	21.76	33.5	2.99	4.6
Registered nurses.....	59.00	100.0	38.31	64.9	20.68	35.1	5.83	9.9
Sales and office.....	27.09	100.0	19.03	70.3	8.05	29.7	1.83	6.8
Sales and related.....	25.21	100.0	19.14	75.9	6.07	24.1	1.42	5.6
Office and administrative support.....	28.23	100.0	18.97	67.2	9.26	32.8	2.08	7.4
Service.....	19.82	100.0	14.13	71.3	5.69	28.7	1.04	5.3
Natural resources, construction, and maintenance.....	37.11	100.0	24.88	67.1	12.23	32.9	2.03	5.5
Construction, extraction, farming, fishing, and forestry.....	37.90	100.0	25.04	66.1	12.87	33.9	1.63	4.3
Installation, maintenance, and repair.....	36.26	100.0	24.72	68.2	11.55	31.8	2.46	6.8
Production, transportation, and material moving.....	29.37	100.0	19.42	66.1	9.95	33.9	1.78	6.1
Production.....	28.14	100.0	18.64	66.2	9.50	33.8	1.74	6.2
Transportation and material moving.....	30.47	100.0	20.11	66.0	10.36	34.0	1.82	6.0
Industry group								
Education and health services.....	42.79	100.0	28.97	67.7	13.81	32.3	3.26	7.6
Educational services.....	53.80	100.0	35.63	66.2	18.17	33.8	3.50	6.5
Elementary and secondary schools.....	52.85	100.0	34.68	65.6	18.17	34.4	2.82	5.3
Junior colleges, colleges, and universities.....	59.89	100.0	39.72	66.3	20.17	33.7	5.27	8.8
Health care and social assistance.....	36.14	100.0	24.95	69.0	11.19	31.0	3.12	8.6
Hospitals.....	50.43	100.0	32.35	64.1	18.09	35.9	4.90	9.7

¹ Includes costs for wages and salaries and benefits.

² Includes workers in the private nonfarm economy except those in private households, and workers in the public sector, except the federal government.

³ Includes postsecondary teachers; primary, secondary, and special education teachers; and other teachers and instructors.

Table 3. Employer Costs for Employee Compensation for state and local government workers by occupational and industry group

[Dec. 2019]

Series	Total compensation ¹ Cost (\$)	Wages and salaries Cost (\$)	Total benefits Cost (\$)	Paid leave Cost (\$)	Supplemental pay Cost (\$)	Insurance Cost (\$)	Retirement and savings Cost (\$)	Legally required benefits Cost (\$)
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
State and local government workers....	52.14	100.0	32.50	62.3	19.63	37.7	3.89	12.1
Occupational group								
Management, professional, and related.....	62.63	100.0	40.39	64.5	22.24	35.5	4.40	10.6
Professional and related.....	60.83	100.0	39.53	65.0	21.30	35.0	6.4	10.9
Teachers ²	68.94	100.0	46.03	66.8	22.91	33.2	3.45	10.4
Primary, secondary, and special education school teachers.....	68.53	100.0	45.15	65.9	23.38	34.1	4.5	11.2
Sales and office.....	35.81	100.0	20.67	57.7	15.15	42.3	3.13	9.27
Office and administrative support.....	35.99	100.0	20.72	57.6	15.27	42.4	3.14	10.9
Service.....	37.93	100.0	21.78	57.4	16.15	42.6	3.19	12.7
Industry group								
Education and health services.....	54.61	100.0	35.24	64.5	19.37	35.5	3.60	11.4
Educational services.....	55.96	100.0	36.35	64.9	19.62	35.1	3.46	11.4
Elementary and secondary schools.....	54.30	100.0	35.32	65.0	18.98	35.0	2.82	12.1
Junior colleges, colleges, and universities.....	60.44	100.0	39.16	64.8	21.29	35.2	5.26	10.2
Health care and social assistance.....	46.28	100.0	28.44	61.5	17.84	38.5	4.46	9.6
Hospitals.....	48.77	100.0	30.57	62.7	18.20	37.3	4.71	9.7
Public administration.....	50.12	100.0	29.00	57.9	21.12	42.1	4.66	9.3

¹ Includes costs for wages and salaries and benefits.

² Includes postsecondary teachers; primary, secondary, and special education teachers; and other teachers and instructors.

Table 4. Employer Costs for Employee Compensation for private industry workers by occupational and industry group
[Dec. 2019]

Series	Total compensation ¹ Cost (\$)	Wages and salaries Cost (\$)	Total benefits Cost (\$)	Paid leave Cost (\$)	Supplemental pay Cost (\$)	Insurance Cost (\$)	Retirement and savings Cost (\$)	Legally required benefits Cost (\$)	Percent
Private industry workers.....	34.72	100.0	24.36	70.1	10.37	29.9	2.53	7.3	1.19
Occupational group									
Management, professional, and related.....	60.83	100.0	42.33	69.6	18.49	30.4	5.56	9.1	2.22
Management, business, and financial.....	69.26	100.0	47.92	69.2	21.33	30.8	6.59	9.5	3.18
Professional and related.....	55.95	100.0	39.10	69.9	16.85	30.1	4.96	8.9	1.67
Sales and office.....	26.32	100.0	18.89	71.8	7.43	28.2	1.72	6.5	0.73
Sales and related.....	25.18	100.0	19.14	76.0	6.04	24.0	1.41	5.6	0.67
Office and administrative support.....	27.12	100.0	18.72	69.0	8.40	31.0	1.93	7.1	0.77
Service.....	17.29	100.0	13.06	75.6	4.22	24.4	0.74	4.3	0.37
Natural resources, construction, and maintenance.....	36.52	100.0	24.78	67.9	11.74	32.1	1.88	5.2	1.35
Construction, extraction, farming, fishing, and forestry.....	37.42	100.0	24.99	66.8	12.43	33.2	1.45	3.9	1.45
Installation, maintenance, and repair.....	35.57	100.0	24.56	69.0	11.01	31.0	2.34	6.6	1.24
Production, transportation, and material moving.....	28.95	100.0	19.27	66.6	9.67	33.4	1.74	6.0	1.27
Production.....	27.87	100.0	18.52	66.5	9.35	33.5	1.71	6.1	1.40
Transportation and material moving.....	29.96	100.0	19.99	66.7	9.98	33.3	1.77	5.9	1.15
Industry group									
Goods-producing ²	39.91	100.0	26.80	67.2	13.11	32.8	2.57	6.5	1.74
Construction.....	39.86	100.0	27.46	68.9	12.40	31.1	1.75	4.4	1.36
Manufacturing.....	39.19	100.0	25.98	66.3	13.21	33.7	2.96	7.6	1.91
Aircraft manufacturing.....	71.97	100.0	43.65	60.7	28.31	39.3	6.42	8.9	5.13
Service-providing ³	33.68	100.0	23.87	70.9	9.81	29.1	2.52	7.5	1.07
Trade, transportation, and utilities, wholesale trade.....	29.04	100.0	20.47	70.5	8.56	29.5	1.86	6.4	0.86
Retail trade.....	37.92	100.0	26.80	70.7	11.12	29.3	2.80	7.4	1.23
Transportation and warehousing, utilities.....	20.57	100.0	15.55	75.6	5.02	24.4	1.00	4.9	0.50
Information.....	56.37	100.0	38.17	67.7	18.19	32.3	5.20	9.2	2.58
Financial activities.....	49.43	100.0	33.12	67.0	16.31	33.0	4.34	8.8	2.92
Financial and insurance, credit intermediation and related activities.....	54.48	100.0	36.06	66.2	18.42	33.8	4.95	9.1	3.43
Insurance carriers and related activities.....	51.16	100.0	33.48	65.4	17.68	34.6	4.54	8.9	3.08
Real estate and rental and leasing.....	35.09	100.0	24.77	70.6	10.32	29.4	2.61	7.4	1.45 ⁴
Professional and business services.....	42.21	100.0	30.17	71.5	12.04	28.5	3.43	8.1	1.54

See footnotes at end of table.

Table 4. Employer Costs for Employee Compensation for private industry workers by occupational and industry group — Continued

[Dec. 2019]

Series	Total compensation ¹ Cost (\$)	Wages and salaries Cost (\$)	Total benefits Cost (\$)	Paid leave Cost (\$)	Supplemental pay Cost (\$)	Insurance Cost (\$)	Retirement and savings Cost (\$)	Legally required benefits Cost (\$)
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Professional and technical services.....	55.64	100.0	39.64	71.2	16.00	28.8	4.98	9.0
Administrative and waste services.....	23.56	100.0	17.77	75.4	5.79	24.6	1.18	5.0
Education and health services.....	36.71	100.0	25.75	70.1	10.96	29.9	3.09	8.4
Educational services.....	46.30	100.0	33.14	71.6	13.16	28.4	3.67	7.9
Junior colleges, colleges, universities and professional schools.....	58.83	100.0	40.81	69.4	18.01	30.6	5.30	9.0
Health care and social assistance.....	35.31	100.0	24.67	69.9	10.64	30.1	3.01	8.5
Leisure and hospitality.....	15.76	100.0	12.44	78.9	3.33	21.1	0.51	3.2
Accommodation and food services.....	15.11	100.0	11.94	79.0	3.18	21.0	0.46	3.1
Other services.....	27.87	100.0	20.89	75.0	6.98	25.0	1.62	5.8

¹ Includes costs for wages and salaries and benefits.² Includes mining, construction, and manufacturing. The agriculture, forestry, farming, and hunting sector is excluded.³ Includes utilities; wholesale trade, retail trade; transportation and warehousing; information, finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; and other services, except public administration.⁴ The relative standard error for this estimate is greater than 30 percent.

Table 5. Employer Costs for Employee Compensation for private industry workers by bargaining and work status

[Dec. 2019]

Series	Total compensation ¹ Cost (\$)	Percent	Wages and salaries Cost (\$)	Percent	Total benefits Cost (\$)	Percent	Paid leave Cost (\$)	Percent	Supplemental pay Cost (\$)	Percent	Insurance Cost (\$)	Percent	Retirement and savings Cost (\$)	Percent	Legally required benefits Cost (\$)	Percent
Union																
All workers.....	48.15	100.0	28.62	59.4	19.53	40.6	3.42	7.1	1.72	3.6	6.78	14.1	3.97	8.2	3.65	7.6
Goods-producing ²	51.68	100.0	29.57	57.2	22.10	42.8	2.81	5.4	2.37	4.6	7.59	14.7	5.03	9.7	4.30	8.3
Service-providing ³	46.61	100.0	28.20	60.5	18.41	39.5	3.68	7.9	1.43	3.1	6.42	13.8	3.51	7.5	3.36	7.2
Nonunion																
All workers.....	33.53	100.0	23.98	71.5	9.55	28.5	2.45	7.3	1.14	3.4	2.41	7.2	0.98	2.9	2.57	7.7
Goods-producing ²	37.87	100.0	26.32	69.5	11.55	30.5	2.53	6.7	1.63	4.3	3.00	7.9	1.21	3.2	3.18	8.4
Service-providing ³	32.73	100.0	23.55	71.9	9.18	28.1	2.44	7.5	1.05	3.2	2.30	7.0	0.94	2.9	2.46	7.5
Full-time																
All workers.....	40.39	100.0	27.79	68.8	12.60	31.2	3.18	7.9	1.48	3.7	3.43	8.5	1.54	3.8	2.97	7.4
Occupational group																
Management, professional and related.....	63.28	100.0	43.70	69.1	19.58	30.9	5.93	9.4	2.38	3.8	4.63	7.3	2.57	4.1	4.07	6.4
Management, business, and financial.....	70.14	100.0	48.40	69.0	21.74	31.0	6.74	9.6	3.23	4.6	4.61	6.6	2.76	3.9	4.41	6.3
Professional and related.....	58.74	100.0	40.59	69.1	18.15	30.9	5.40	9.2	1.82	3.1	4.64	7.9	2.45	4.2	3.84	6.5
Sales and office.....	30.78	100.0	21.53	69.9	9.26	30.1	2.26	7.3	0.95	3.1	2.96	9.6	0.90	2.9	2.20	7.1
Sales and related.....	34.30	100.0	25.32	73.8	8.98	26.2	2.33	6.8	1.07	3.1	2.29	6.7	0.84	2.5	2.44	7.1
Office and administrative support.....	29.16	100.0	19.77	67.8	9.39	32.2	2.22	7.6	0.89	3.1	3.27	11.2	0.92	3.2	2.08	7.1
Service.....	20.81	100.0	14.89	71.5	5.92	28.5	1.18	5.7	0.55	2.6	1.99	9.6	0.44	2.1	1.75	8.4
Natural resources, construction, and maintenance.....	37.50	100.0	25.30	67.5	12.20	32.5	1.97	5.3	1.41	3.8	3.26	8.7	1.96	5.2	3.60	9.6
Construction, extraction, farming, fishing, and forestry.....	38.30	100.0	25.47	66.5	12.84	33.5	1.51	3.9	1.51	3.9	3.29	8.6	2.55	6.7	3.97	10.4
Installation, maintenance, and repair.....	36.64	100.0	25.12	68.6	11.52	31.4	2.46	6.7	1.30	3.6	3.23	8.8	1.33	3.6	3.19	8.7
Production, transportation, and material moving.....	31.03	100.0	20.41	65.8	10.62	34.2	1.99	6.4	1.43	4.6	3.25	10.5	1.23	4.0	2.71	8.7
Production.....	29.03	100.0	19.11	65.8	9.93	34.2	1.83	6.3	1.51	5.2	3.27	11.3	0.84	2.9	2.47	8.5
Transportation and material moving.....	33.32	100.0	21.91	65.8	11.41	34.2	2.17	6.5	1.35	4.1	3.24	9.7	1.68	5.1	2.97	8.9
Industry group																
Goods-producing ²	40.38	100.0	27.05	67.0	13.32	33.0	2.63	6.5	1.77	4.4	3.75	9.3	1.81	4.5	3.36	8.3
Construction.....	40.35	100.0	27.70	68.6	12.66	31.4	1.79	4.4	1.39	3.4	3.38	8.4	2.19	5.4	3.91	9.7
Manufacturing.....	39.63	100.0	26.24	66.2	13.39	33.8	3.02	7.6	1.94	4.9	3.92	9.9	1.49	3.8	3.03	7.6
Service-providing ³	40.40	100.0	28.00	69.3	12.40	30.7	3.34	8.3	1.40	3.5	3.34	8.3	1.46	3.6	2.86	7.1
Trade, transportation, and utilities.....	35.43	100.0	24.40	68.9	11.03	31.1	2.58	7.3	1.17	3.3	3.03	8.5	1.49	4.2	2.77	7.8
Information.....	61.98	100.0	41.70	67.3	20.28	32.7	5.86	9.4	2.89	4.7	5.28	8.5	2.26	3.6	3.99	6.4
Financial activities.....	51.89	100.0	34.55	66.6	17.34	33.4	4.66	9.0	3.11	6.0	4.43	8.5	1.88	3.6	3.26	6.3
Professional and business services.....	46.38	100.0	32.76	70.6	13.61	29.4	3.95	8.5	1.75	3.8	3.13	6.8	1.51	3.3	3.26	7.0
Education and health services.....	40.07	100.0	27.61	68.9	12.46	31.1	3.61	9.0	0.83	2.1	3.85	9.6	1.49	3.7	2.68	6.7

See footnotes at end of table.

Table 5. Employer Costs for Employee Compensation for private industry workers by bargaining and work status — Continued

[Dec. 2019]

Series	Total compensation ¹ Cost (\$)	Percent	Wages and salaries Cost (\$)	Percent	Total benefits Cost (\$)	Percent	Paid leave Cost (\$)	Percent	Supplemental pay Cost (\$)	Percent	Insurance Cost (\$)	Percent	Retirement and savings Cost (\$)	Percent	Legally required benefits Cost (\$)	Percent
Leisure and hospitality.....	20.82	100.0	15.41	74.0	5.41	26.0	1.07	5.1	0.42	2.0	1.67	8.0	0.47	2.3	1.78	8.5
Other services.....	33.06	100.0	23.92	72.4	9.14	27.6	2.29	6.9	0.53	1.6	2.53	7.7	1.23	3.7	2.55	7.7
All workers.....	18.11	100.0	14.29	78.9	3.82	21.1	0.63	3.5	0.32	1.7	0.82	4.5	0.30	1.7	1.75	9.7
Occupational group																
Management, professional and related.....	40.35	100.0	30.93	76.6	9.43	23.4	2.46	6.1	0.89	2.2	1.90	4.7	0.99	2.4	3.19	7.9
Professional and related.....	40.43	100.0	30.83	76.2	9.60	23.8	2.53	6.3	0.82	2.0	2.02	5.0	1.05	2.6	3.18	7.9
Sales and office.....	15.98	100.0	12.78	80.0	3.20	20.0	0.48	3.0	0.23	1.5	0.79	4.9	0.25	1.6	1.45	9.1
Sales and related.....	14.47	100.0	11.89	82.1	2.59	17.9	0.32	2.2	0.21	1.4	0.51	3.5	0.18	1.2	1.37	9.5
Office and administrative support.....	18.50	100.0	14.26	77.1	4.23	22.9	0.73	3.9	0.28	1.5	1.26	6.8	0.37	2.0	1.59	8.6
Service.....	13.80	100.0	11.26	81.6	2.54	18.4	0.31	2.2	0.19	1.4	0.47	3.4	0.12	0.9	1.45	10.5
Production, transportation, and material moving.....	18.74	100.0	13.70	73.1	5.04	26.9	0.52	2.8	0.48	2.6	1.34	7.1	0.51	2.7	2.19	11.7
Transportation and material moving.....	19.87	100.0	14.20	71.5	5.67	28.5	0.58	2.9	0.55	2.8	1.59	8.0	0.65	3.2	2.30	11.6
Industry group																
Service-providing ²	18.03	100.0	14.24	79.0	3.80	21.0	0.63	3.5	0.31	1.7	0.82	4.5	0.30	1.7	1.73	9.6
Trade, transportation, and utilities.....	16.93	100.0	13.03	77.0	3.90	23.0	0.49	2.9	0.29	1.7	1.06	6.3	0.42	2.5	1.63	9.6
Professional and business services.....	19.99	100.0	16.32	81.7	3.66	18.3	0.68	3.4	0.40	2.0	0.47	2.3	0.10 ⁴	0.5 ⁴	2.02	10.1
Education and health services.....	27.34	100.0	20.55	75.2	6.79	24.8	1.65	6.0	0.58	2.1	1.65	6.0	0.66	2.4	2.26	8.3
Leisure and hospitality.....	12.25	100.0	10.37	84.7	1.88	15.3	0.12	1.0	0.11	0.9	0.21	1.8	0.07	0.5	1.37	11.2

¹ Includes costs for wages and salaries and benefits.

² Includes mining, construction, and manufacturing. The agriculture, forestry, farming, and hunting sector is excluded.

³ Includes utilities; wholesale trade; retail trade; transportation and warehousing; information; finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; and other services, except public administration.

⁴ The relative standard error for this estimate is greater than 30 percent.

Table 6. Employer Costs for Employee Compensation for private industry workers by establishment size and industry group
 [Dec. 2019]

Series	Total compensation ¹	Wages and salaries	Total benefits	Paid leave	Supplemental pay	Insurance	Retirement and savings	Legally required benefits
	Cost (\$)	Percent	Cost (\$)	Percent	Cost (\$)	Percent	Cost (\$)	Percent
All workers								
1-99 workers.....	28.77	100.0	21.27	73.9	7.50	26.1	1.78	6.2
1-49 workers.....	27.84	100.0	20.84	74.9	7.00	25.1	1.67	6.0
50-99 workers.....	31.96	100.0	22.73	71.1	9.23	28.9	2.14	6.7
100 workers or more.....	41.75	100.0	28.01	67.1	13.75	32.9	3.42	8.2
100-499 workers.....	35.86	100.0	24.86	69.3	11.00	30.7	2.68	7.5
500 workers or more.....	49.46	100.0	32.12	64.9	17.34	35.1	4.39	8.9
Goods-producing²								
1-99 workers.....	33.95	100.0	24.04	70.8	9.92	29.2	1.72	5.1
1-49 workers.....	32.34	100.0	23.31	72.1	9.03	27.9	1.52	4.7
50-99 workers.....	37.77	100.0	25.75	68.2	12.02	31.8	2.22	5.9
100 workers or more.....	45.10	100.0	29.21	64.8	15.89	35.2	3.32	7.4
100-499 workers.....	42.15	100.0	27.94	66.3	14.21	33.7	2.91	6.9
500 workers or more.....	49.74	100.0	31.20	62.7	18.53	37.3	3.95	7.9
Service-providing³								
1-99 workers.....	27.89	100.0	20.80	74.6	7.09	25.4	1.79	6.4
1-49 workers.....	27.16	100.0	20.47	75.4	6.69	24.6	1.69	6.2
50-99 workers.....	30.61	100.0	22.02	72.0	8.58	28.0	2.12	6.9
100 workers or more.....	40.94	100.0	27.71	67.7	13.23	32.3	3.45	8.4
100-499 workers.....	34.18	100.0	24.03	70.3	10.14	29.7	2.62	7.7
500 workers or more.....	49.40	100.0	32.32	65.4	17.08	34.6	4.48	9.1

¹ Includes costs for wages and salaries and benefits.

² Includes mining, construction, and manufacturing. The agriculture, forestry, farming, and hunting sector is excluded.

³ Includes utilities; wholesale trade; retail trade; transportation and warehousing; information, finance and insurance; real estate and rental and leasing; professional and technical services; management of companies and enterprises; administrative and waste services; educational services; health care and social assistance; arts, entertainment and recreation; accommodation and food services; and other services, except public administration.

Table 7. Employer Costs for Employee Compensation for private industry workers by census region and division
 [Dec. 2019]

Area ¹	Total compensation ²		Wages and salaries		Total benefits		Paid leave		Supplemental pay		Insurance		Retirement and savings		Legally required benefits	
	Cost (\$)	Percent	Cost (\$)	Percent	Cost (\$)	Percent	Cost (\$)	Percent	Cost (\$)	Percent	Cost (\$)	Percent	Cost (\$)	Percent	Cost (\$)	Percent
Northeast.....	39.22	100.0	26.92	68.6	12.30	31.4	3.09	7.9	1.36	3.5	3.31	8.4	1.49	3.8	3.05	7.8
New England.....	40.42	100.0	27.86	68.9	12.56	31.1	3.20	7.9	1.28	3.2	3.32	8.2	1.76	4.3	3.00	7.4
Middle Atlantic.....	38.79	100.0	26.59	68.5	12.20	31.5	3.05	7.9	1.38	3.6	3.31	8.5	1.40	3.6	3.07	7.9
South.....	30.48	100.0	21.88	71.8	8.60	28.2	2.11	6.9	1.09	3.6	2.14	7.0	0.97	3.2	2.29	7.5
South Atlantic.....	31.10	100.0	22.33	71.8	8.77	28.2	2.18	7.0	1.03	3.3	2.21	7.1	0.98	3.2	2.36	7.6
East South Central.....	27.94	100.0	19.74	70.6	8.20	29.4	1.91	6.9	1.11	4.0	2.17	7.8	0.93	3.3	2.08	7.4
West South Central.....	30.58	100.0	22.10	72.2	8.49	27.8	2.09	6.8	1.18	3.9	1.99	6.5	0.98	3.2	2.24	7.3
Midwest.....	33.05	100.0	22.85	69.2	10.19	30.8	2.32	7.0	1.24	3.8	2.91	8.8	1.19	3.6	2.53	7.6
East North Central.....	33.76	100.0	23.23	68.8	10.52	31.2	2.36	7.0	1.33	4.0	2.98	8.8	1.28	3.8	2.57	7.6
West North Central.....	31.51	100.0	22.03	69.9	9.48	30.1	2.24	7.1	1.05	3.3	2.77	8.8	0.99	3.1	2.43	7.7
West.....	39.37	100.0	27.67	70.3	11.69	29.7	2.95	7.5	1.13	2.9	3.13	8.0	1.43	3.6	3.06	7.8
Mountain.....	33.16	100.0	23.40	70.6	9.76	29.4	2.34	7.1	1.11	3.4	2.63	7.9	1.19	3.6	2.49	7.5
Pacific.....	42.04	100.0	29.51	70.2	12.52	29.8	3.21	7.6	1.13	2.7	3.35	8.0	1.53	3.6	3.31	7.9

¹ The census divisions are defined as follows: New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont; Middle Atlantic: New Jersey, New York, and Pennsylvania; South Atlantic: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; East South Central: Alabama, Kentucky, Mississippi, and Tennessee; West South Central: Arkansas, Louisiana, Oklahoma, and Texas; East North Central: Illinois, Indiana, Michigan, Ohio, and Wisconsin; West North Central: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota; Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; and Pacific: Alaska, California, Hawaii, Oregon, and Washington.

² Includes costs for wages and salaries and benefits.